Water Quality Program

Comment and Response Summary

Volume II:
Stakeholders

CALFED
BAY-DELTA
PROGRAM

Draft: February 6, 1998

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D-035159

WATER QUALITY PROGRAM COMMENT AND RESPONSE SUMMARY

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NOTE TO READER

During Phase I and II of the CALFED Water Quality Program, CALFED staff have received numerous written comments from various agencies and stakeholders. This *Water Quality Program Comment and Response Summary* has been developed to provide a mechanism for compiling, tracking, and responding to written comments received to date on the Water Quality Program from CALFED agencies and stakeholders. Where possible, simple spelling and grammatical errors within the original stakeholder comment have been corrected. However, to preserve the original intent and meaning of the stakeholder comment, no extensive grammatical changes were made.

The *Water Quality Program Comment and Response Summary* has been separated into two volumes. *Volume II* is a compilation of 93 written comments received to date from 39 stakeholders regarding the CALFED Water Quality Program. The *Inventory of Comments from Stakeholders* catalogs these comments by organization, name, and date. *Volume I* is a compilation of written comments received to date from CALFED agencies regarding the CALFED Water Quality Program.

In addition to written comments, both volumes contain compilations of responses which have been developed by various CALFED staff throughout the development of the program. To the extent possible, the sources of these responses have been documented to ensure consistency with other CALFED efforts to respond to comments.

Volume II has been organized into six key topic areas: Water Quality Program, Water Quality Parameters of Concern, Water Quality Targets, Water Quality Actions, Water Quality Projects, and Water Quality Documents. This organizational structure has been used to facilitate the revision of documents and the development of responses to similar types of comments.

INVENTORY OF COMMENTS FROM STAKEHOLDERS

Organization	Person	Date
Agricultural & Urban Water Caucuses Policy Group	Dan Nelson/Byron Buck	7/11/97
Applied Marine Sciences	Robert Spies	4/11/97
Applied Marine Sciences	Robert Spies	4/21/97
Archibald & Wallberg	Elaine Archibald	7/18/97
California Department of Food and Agriculture	A.J. Yates	9/29/97
California Department of Pesticide Regulation	John Sanders	8/8/97
California Rice Industry Association	Jean-Pierre Cativiela	1/27/98
California Urban Water Agencies	Byron Buck	12/4/96
California Urban Water Agencies	Byron Buck	3/2/97
California Urban Water Agencies	Byron Buck	4/2/97
California Urban Water Agencies	Byron Buck	5/16/97
California Urban Water Agencies	Byron Buck	11/7/97
Central Delta Water Agency	Thomas Zuckerman	9/25/97
Central Delta Water Agency	Thomas Zuckerman	9/25/97
Central Delta Water Agency	Thomas Zuckerman	8/13/97
Ciba-Gelgy Corporation	Dennis Kelly	12/4/96
City of Sacramento	Bill Crooks	4/7/97
City of Sacramento	Bill Crooks	11/18/97
Clean Water Action	Marguerite Young	7/16/97
Clean Water Action	Marguerite Young	10/28/97
Contra Costa Water District	Richard Denton	8/15/97
Contra Costa Water District	Richard Denton	1/10/97
Contra Costa Water District	Richard Denton	1/14/97
Delta Keeper	Bill Jennings/Mike Lozeau	5/29/97
Delta Keeper	Bill Jennings/Mike Lozeau	7/2/97
DowElanco	Bryan Stuart	12/6/96
DowElanco	Bryan Stuart/John Jachetta	1/10/97
Eco-Risk	Scott Ogle	4/17/97
Environmental Water Caucus	Inge Werner	10/28/97
EVS Consultants	Howard Bailey	4/25/97
G. Fred Lee & Associates	G. Fred Lee	1/15/97
G. Fred Lee & Associates	G. Fred Lee	2/12/97
G. Fred Lee & Associates	G. Fred Lee	2/12/97
G. Fred Lee & Associates	G. Fred Lee	4/15/97
G. Fred Lee & Associates	G. Fred Lee	4/17/97
G. Fred Lee & Associates	G. Fred Lee	4/24/97
G. Fred Lee & Associates	G. Fred Lee	4/26/97
G. Fred Lee & Associates	G. Fred Lee	5/8/97

Organization	Person	Date
G. Fred Lee & Associates	G. Fred Lee	5/16/97
G. Fred Lee & Associates	G. Fred Lee	6/12/97
G. Fred Lee & Associates	G. Fred Lee	7/1/97
G. Fred Lee & Associates	G. Fred Lee	8/2/97
G. Fred Lee & Associates	G. Fred Lee	8/11/97
G. Fred Lee & Associates	G. Fred Lee	8/15/97
G. Fred Lee & Associates	G. Fred Lee	8/16/97
G. Fred Lee & Associates	G. Fred Lee	8/18/97
G. Fred Lee & Associates	G. Fred Lee	8/20/97
G. Fred Lee & Associates	G. Fred Lee	10/1/97
G. Fred Lee & Associates	G. Fred Lee	11/18/97
G. Fred Lee & Associates	G. Fred Lee	11/20/97
G. Fred Lee & Associates	G. Fred Lee	11/22/97
G. Fred Lee & Associates	G. Fred Lee	12/26/97
G. Fred Lee & Associates	G. Fred Lee	12/27/97
G. Fred Lee & Associates	G. Fred Lee	12/31/97
G. Fred Lee & Associates	G. Fred Lee	1/26/98
G. Fred Lee & Associates	G. Fred Lee	1/28/98
Larry Walker and Associates	Thomas R. Grovhoug	1/27/98
Metropolitan Water District of Southern California	Lynda Smith	4/9/97
Metropolitan Water District of Southern California	Pete Rhoads	4/15/97
Metropolitan Water District of Southern California	Phyllis Fox	9/20/96
Mining Remedial Recovery Company	Linda Mercurio	11/27/96
Mining Remedial Recovery Company	Linda Mercurio	4/2/97
Modesto Irrigation District	Walter Ward	11/26/96
Natural Resources Defense Council	Ronnie Ann Cohen/Erik Olson	4/2/97
North Bay Contractors	Unknown	2/7/97
Northern California Water Association	Kati Buehler	10/22/97
Novartis Crop Protection, Inc.	Dennis Kelly	10/3/97
Sacramento Regional County Sanitation District	Jerry Troyan	11/27/96
Sacramento Regional County Sanitation District	Jerry Troyan	4/4/97
Sacramento Regional County Sanitation District	Jerry Troyan	8/13/97
San Francisco Estuary Institute	Bruce Thompson	4/17/97
San Francisco Estuary Institute	Bruce Thompson	4/25/97
San Joaquin River Group	Allen Short	1/28/97
Solano County Water Agency	David B. Okita	2/3/97
Solano County Water Agency	David B. Okita	3/6/97

Organization	Person	Date
Solano County Water Agency	David B. Okita	7/11/97
Solano County Water Agency	David B. Okita	10/8/97
South Delta Water Agency	Alex Hildebrand	8/25/97
Stephen D. Murrill & Company	Stephen D. Murrill	4/9/97
Stephen D. Murrill & Company	Stephen D. Murrill	1/27/98
Stockton East Water District	Jeanette Thomas	11/27/96
Summers Engineering, Inc.	Joseph C. McGahan	4/4/97
Summers Engineering, Inc.	Joseph C. McGahan	11/13/97
The Bay Institute of San Francisco	Gary Bobker	1/6/98
The Bay Institute of San Francisco Environmental Defense Fund Natural Resources Defense Council Save San Francisco Bay Association	Gary Bobker David Yardas Hal Candee Barry Nelson	4/29/97
Tom Mongan, Consulting Engineer	Tom Mongan	8/8/97
UC Davis	Frank Zalom	12/11/96
UC Davis	Inge Werner	8/15/97
Unknown	Unknown	3/3/97
Unknown	Unknown	After 3/30/97
Unknown	Unknown	After 3/30/97
Unknown	Unknown	After 6/3/97
Westlands Water District	David Orth	12/6/96

DIRECTORY OF COMMENTS FROM STAKEHOLDERS

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WATER QUALITY PROGRAM

CALFED
BAY-DELTA
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Comments from Stakeholders
Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
General	I have concern with the policy by CALFED of not providing written response to comments. I believe that such responses are required to maintain credibility in the public involvement aspects of the CALFED process.	Thomas Grovhoug, *Larry Walker Associates*	1/27/98	
General	The Program's impact analyses should be immediately expanded to include: • more comprehensive evaluation of the potential benefits of source protection, pollution prevention, and watershed restoration elements; • prioritization criteria for implementation of water quality measures; • comparative cost analysis of meeting drinking water quality standards by treatment and source protection versus conveyance changes; and, • more thorough evaluation of in-Delta water quality impairments of each conveyance alternative An independent scientific review of technical experts in aspects of water quality regulation and management should be convened in early 1998 to review the water quality common program.	Gary Bobker, *The Bay Institute of San Francisco*	1/6/98	

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Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
General	There have been several discussions in the Water Quality Technical Group about the appropriate of using SWRCB and the regional board's 303(d) list as the basis for designating impaired waterbodies and the constituents responsible for the impairment. The basic approach that is being used to develop the 303(d) list is technically invalid in a number of ways, the most important of which is the assumption that a waterbody is impaired if there is more than one exceedance of a water quality standard in three years. The USEPA criteria and standards develops are, with a few exceptions, grossly overprotective. This makes the 303(d) list an unreliable list of truly impaired waterbodies, since many of the impairments are administrative in nature. A review of how this list is developed would provide understanding as to why the 303(d) list and the associated parameter are not an appropriate basis for formulating CALFED programs in the water quality management area. It should not be assumed that a waterbody on the 303(d) list is impaired, where this impairment represents an area that should receive CALFED funding for control of the constituents responsible for the impairment. If CALFED is to develop a technically valid water quality management program, it will be necessary to critically examine whether the waterbodies and the associated constituents on the 303(d) list represent real use impairments or simply reflect administrative exceedances of water quality criteria/standards. Failure to adopt this approach could readily result in CALFED spending large amounts of funds in appropriately, which will have little or no impact on the beneficial uses of the Delta and its resources.	G. Fred Lee, *G. Fred Lee & Associates*	12/31/97	

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Topic	Comment	Person/ Organization	Date	Response
General	While there is a need for studies on sediment impacts on water quality, to conduct a routine monitoring program of chemical concentrations of constituents and sediments is of limited utility. Even toxicity measurements in sediment, while far more reliable than chemical concentration measurements for identifying toxic conditions, still do not provide interpretable results with respect to the significance of chemical constituents in sediments that impact the beneficial uses of the water body in which the sediments are located. CALFED needs to carefully formulate a sediment quality investigation program that properly incorporates what is well known in the field today with how chemical constituents in sediments potentially impact the beneficial use of a water body. CALFED needs to develop a program that begin to address the highly significant data gaps that exist between measurement of a characteristic of a sediment and the beneficial use of the water bodies in which the sediments are located. CALFED water quality sediment programs should be based on an effects-based approach rather than a chemical approach. This is a far more reliable approach than the chemically-based approach. The chemically-based approach is technically invalid and can readily result in massive waste of public and private funds in sediment constituent control that will have not impact on the beneficial uses of the water body in which the sediments are located.	G. Fred Lee, *G. Fred Lee & Associates*	8/20/97	

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Topic	Comment	Person/ Organization	Date	Response
General	The implications of the California Toxics Rule with respect to dredging and dredged sediment management in the Delta are significant. Typically, if implemented as currently required under the Clean Water Act, it will significantly unnecessarily restrict the use of contaminated sediments for channel maintenance and dredging, as well as beneficial use of contaminated sediments for levee enhancement and shallow water habitat development. I advocate the approach of working toward a proper evaluation of the real water quality impacts associated with the dredging and beneficial use of contaminated dredged sediments. I have previously suggested the need to appoint an advisor to the CVRWQCB, DWR and CALFED who would specifically formulate approaches to address these issues. Of particular importance is the development of technically valid, cost-effective guidelines that ser ve as the basis for managing dredging and dredged sediment disposal and utilization within the Delta that would promote the beneficial uses of contaminated sediments while protecting water quality/ecosystems within the delta.	G. Fred Lee, *G. Fred Lee & Associates*	11/20/97	
General	I do not feel that it would require a several year delay to define whether the CALFED constituents of concern are likely causing "harm" and therefore CALFED needs to start to develop remediation programs in the near term to control the problem. This could be done in a few months. As part of this review process, information would also be developed on the information gaps that exist now that should be eliminated before CALFED (public) can decide whether there is high priority need to develop a constituents input control program.	G. Fred Lee, *G. Fred Lee & Associates*	4/24/97	

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Topic	Comment	Person/ Organization	Date	Response
General	There may be a lack of understanding of true "water quality." Some are using the term "water quality" to be synonymous with "chemical concentration of constituents." This approach is technically invalid and has previously led and could lead again to massive waste of public and private funds. In order to address water quality issues properly, one must understand the fields of aquatic chemistry, aquatic toxicology, biology and water quality and the interrelationships among the basic science and engineering in each of these areas. Water quality is not a list of chemical constituents and cannot be judged by a mechanical comparison to a set of criteria/standards. The public who voted for Prop 204 are entitled to know and be reasonably certain that appropriate standards are being used as the basis for expenditure of funds for water quality management.	G. Fred Lee, *G. Fred Lee & Associates*	2/12/97	
General	I am enclosing slides from a presentation regarding problems with current water quality monitoring in identifying pollution and pollutants. There is also information on the Evaluation Monitoring approach which focuses monitoring resources on determining the constituents in stormwater runoff that impact the water quality beneficial uses for the receiving waters for the runoff. This discussion has considerable relevance to CALFED's development of its water quality monitoring programs associated with water quality problem definition and the remediation approaches that will be implemented. [Enclosures in main file].	G. Fred Lee, *G. Fred Lee & Associates*	11/20/97	

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Topic	Comment	Person/ Organization	Date	Response
General	The San Joaquin River Group is concerned that CALFED is expanding the scope of its efforts beyond the Delta to include the entire watershed; such an expansion in scope is not within CALFED's mandate. CALFED's mandate is to fix the broken Delta. It does not have authority over other existing programs such as the CVPIA/AFRP, San Joaquin River Management Program, FERC-mandated action, and the San Joaquin River Group/Export Interests' Letter of Intent. The upstream actions of these other programs should be coordinated with the CALFED program but CALFED does not have the authority to supersede or to dictate actions to these other programs or the affected water agencies. We urge CALFED to stay within its original mandate and develop a long-term solution to Bay-Delta problems.	Allen Short, *San Joaquin River Group*	1/28/97	
General	CALFED's water quality common program should include the context of water rights. For resources categories the table should include Water Quality as a Resource category. San Francisco Bay, Sacramento-San Joaquin Delta and upstream river water quality should be reviewed in detail in the EIR/EIS for the extent of the historical record. Comparison of the changes in water quality should be analyzed over the full historical period of the surface water hydrology using detailed water quality transport models.	*North Bay Contractors*	2/7/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* CALFED Response: The reference to water rights in connection to water quality is not clear. Historical water quality data will be reviewed and evaluated in the CALFED process, though decision have yet to be made on how much of this will be accomplished in the Programmatic stage of the process.

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Topic	Comment	Person/ Organization	Date	Response
General	I am concerned with what I have been observing in the Water Quality Task Force with how water quality benefits are to be assessed. Thus far, the approach is grossly over-simplistic and unreliable where a brute force approach of assuming that the reduction in the total concentration of a chemical constituent that in some undefined way is related to a presumed water quality problem that exists in the Delta, should be redirected to first defining what real water quality problems exist within the Delta and its tributaries that influence Delta resources, determining their cause and the source of the specific constituents responsible for the problem. By specific constituent I do not mean mercury irrespective of its chemical form but those form of mercury that lead to excessive bioaccumulation within Delta aquatic life. The issue of predicting and assessing benefits from the CALFED water quality projects is far from being reliably formualted at this time.	G. Fred Lee, *G. Fred Lee & Associates*	4/17/97	
General	Focusing on regional sustained water quality benefits is an appropriate goal.	G. Fred Lee, *G. Fred Lee & Associates*	4/17/97	
General	The statement "The additional evidence being that the chemicals are actually demonstrated to cause populations changes to species of concern." is too strong from my perspective. It could imply that we want a "bodycount" before action is taken. As I indicated, bodycount should not be the criteria, but instead action should be taken when it is the Best Professional Judgment (reasonable consensus) among a panel of experts in aquatic chemistry, aquatic toxicology and water/ecosystem quality that a constituent from a particular source is present in a, potentially toxic/available chemical form that could be harmful to the beneficial uses of the Delta resources.	G. Fred Lee, *G. Fred Lee & Associates*	4/24/97	

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Topic	Comment	Person/ Organization	Date	Response
General	The priority of development of CALFED control programs must be for those constituents for which there is a substantial likelihood of adverse impacts such as the dormant spray diazinon situation in the Delta.	G. Fred Lee, *G. Fred Lee & Associates*	4/26/97	
General	It is inappropriate to assume that the elevated concentrations of a regulated constituent represents a real water quality problem for which CALFED should immediatelly implement a control program. The CALFED approach has been one of of failing to define the real water quality use impairments that are occuring in the Delta due to chemical constituent inputs. An elevated concentration of a regulated constituent should be considered a potential problem that should be investigated through CALFED support to determine whether there is areal water quality use impairment associated with the elevated concentration or whether th eexceedance of a water quality standard in Delta water or tributary waters represents an administrative exceedance related to how the US EPA criteria are being implemented into state standards as regulatory limits. There is general agreement that CALFED should focus its resources on defining the real water quality use impairments that are occuring within the Delta to in-Delta downstream users. CALFED should also focus its resources on defining the upstream (Delta watershed) use impairments that are important to Delta resources. CALFED should proceed to define real water quality use impairments that should be addressed as part of formulating technically valid, cost-effective water quality and ecosystem management programs. An Evaluation Monitoring approach of first defining real water quality use impairments should be adopted.	G. Fred Lee, *G. Fred Lee & Associates*	4/15/97	
General	Supplement this study plan with a timeline and budget.	Linda Mercurio *Mining Remedial Recovery Company*	11/27/96	

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Topic	Comment	Person/ Organization	Date	Response
General	Has a programmatic EIS been done that is successful and how did they handle the level of detail?	Unknown	1/23/97	CALFED Response: Yes, there have been successful programmatic EISs.
General	CALFED should focus on chemical impacts rather than chemicals in evaluating the success of the CALFED program. At the August 6, 1997, WQTG meeting, Rick Woodard raised the argument that of having to use a "legally defensible" tool, such as a chemical concentration, relative to the water qualtiy objectives. That approach is only legally defensible for point source dischargers of domestic and industrial waste waters where such dischargers are obligated to meet water quality standards (objectives) at the edge of a mixing zone. It is not a legally defendable approach for urban stormwater and non-point source discharges, which are likely to be the primary sources of materials that are of concern to Delta water quality. Based on the criteria used to develop them, USEPA and state standards are inappropriate goals for urban stormwater runoff water quality management. The basic problem is that regulating urban stormwater runoff using the same approach as NPDES municipal and industrial waste water discharges, i.e., meeting water quality standards at the edge of a mixing zone where there is no more than one violation of a standard every three years, will cost the regulated community one to two dollars per person per day forever. It is for this reason that the USEPA and the WRCB backed off from Clean Water Act requirements in regulating urban stormwater runoff. There are fundamental issues as to why urban stormwater runoff should be regulated differently that relate to concentration of available forms and duration of exposure relationships that typically occur in urban stormwater runoff relative to the same relationships in the typical stormwater runoff event. It is the USEPA recommended policy now that regulated urban stormwater dischargers should focus on finding real water quality problems - use impairments in the receiving waters caused by stormwater runoff associated constituents. Where such problems are found, then these should be controlled using BMPs to the MEP. This is a legally defensible approach and the approach that CALFED should follow in establishing goals for chemical constituents that are derived from regulated urban stormwater runoff.	G. Fred Lee, *G. Fred Lee & Associates*	8/18/97	

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Comments from Stakeholders
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Topic	Comment	Person/ Organization	Date	Response
General	A water quality problem due to chemical constituents or pathogenic organisms is one that impairs the numbers, types and characteristics of desirable form of aquatic life in a waterbody. The goal of the CALFED water quality management program should be to control the inputs fo chemical constituents andc pathogenic organisms that have been shown to have a high probability of being adverse to human health, aquatic life and wildlife. For aquatic life and wildlife, this goal should be manifested in developing sufficient knowledge of the potential impacts of chemical constituents that could impair the numbers, types and characteristics of desirable form of aquatic life. The issue that must be addressed for existing discharges is whether the aquatic and other ecosystem resources of the Delta are degraded by chemical constituent inputs to the Delta or its tributaries compared to the resources that could be present based on habitat characteristics. The role chemical constituents play in adversely impacting Delta aquatic resources has not been adequately defined and must be addressed before any management programs are implemented by CALFED.	G. Fred Lee, *G. Fred Lee & Associates*	4/15/97	
General	The current CALFED water quality management program has jumped all the way to control programs without doing the necessary background work to define real water quality use impairments, especially as they relate to ecosystem issues. Such an approach is extremely dangerous and almost certainly will result in massive waste of public funds in implementing control programs that have limited effectivenes in addressing real water quality issues.	G. Fred Lee, *G. Fred Lee & Associates*	4/15/97	

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Topic	Comment	Person/ Organization	Date	Response
General	One of the basic problems with CALFED is that the Water Quality Task Group focused on defining water quality problems based on an exceedance of USEPA water quality criteria without properly evaluating whether the exceedance was an administrative exceedance related to how the USEPA water quality criteria are implemented into state standards (objectives) or whether the exceedance represented a real water quality use impairment which CALFED should utilize its resources to address.	G. Fred Lee, *G. Fred Lee & Associates*	4/17/97	
General	The most important issue that must be addressed is to change the focus from chemical constituents to real water quality issues of concern to the public. Cache Creek is an example - public funds should not be spent in a crash massive public works program trying to control all mercury input to the Delta. There are not enough funds to do this. There is a need to incorporate ecological and public health risk assessment into assigning priorities for funding of projects. The bulk of mercury that is transported into the Delta each year does not convert to methyl mercury. CALFED must fund the studies needed to define what forms of mercury from the various sources convert to methyl mercury that bioaccumulates to excessive levels in Delta and Bay fish. Whether or not there is a real public health problem today due to excessive accumulation of mercury in fish should be determined.	G. Fred Lee, *G. Fred Lee & Associates*	4/17/97	

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Topic	Comment	Person/ Organization	Date	Response
General	Rather than measuring mercury inputs to the Delta and taking a shot-gun approach to try to control these inputs, the focus should be on first determining whether there is excessive mercury within edible aquatic life tissue within the Delta. If this is a mercury problem, then determine the specific forms of mercury that are added to the Delta that are responsible for the development of methyl mercury in Delta aquatic life tissue. Once these are known, then determine the specific sources for those forms. As you know, the mercury focus group has some ideas about these issues. CALFED should fund specific projects to evaluate the reliability of these ideas. Similar approaches should be used for each of the other water quality use impairments that are occurring related to chemical constituent input, such as excessive nutrients (nitrogen and phosphorus compounds). While there is a well known excessive fertilization problem associated with domestic water supplies that use Delta waters, it also appears that there is excessive fertilization of Delta waters which is manifested in sufficient growth of aquatic plants to interfere with recreational uses. This is a real use impairment that needs to be considered by CALFED. If it is determined that there is a water quality problem due to excessive fertilization within the Delta, then attention should be given to the relative role of nitrogen vs. Phosphorus in controlling the excessive plant biomass and the source of the nutrient(s) responsible for this excessive growth. Then control programs can be formulated by CALFED to address in-Delta eutrophication problems.	G. Fred Lee, *G. Fred Lee & Associates*	4/15/97	

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Comments from Stakeholders
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Topic	Comment	Person/ Organization	Date	Response
General	The approach of the Parameter Assessment team and discussions held at the April 1, 1997 meeting addressed key issues that need to be addressed by CALFED management. A number of people at the April 1997 meeting informed the CALFED Delta water quality management team that the Basin Plan objectives approach in which the numeric values that were used to establish exceedances of water quality objectives which causes a constituent to get on the 303(d) list is not a valid approach for formulating CALFED water quality management programs.	G. Fred Lee, *G. Fred Lee & Associates*	5/8/97	
General	CALFED's water quality program needs to adopt an Evaluation Monitoring approach for defining real water quality problems.	*North Bay Contractors*	2/7/97	CALFED RESPONSE: It is not clear what is meant by "Evaluation Monitoring Approach." We need to identify the party making this comment and seek clarification. *Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 24, 1997: Comment noted.
General	While many people have focused attention on habitat destruction and excessive pumping of Delta water for export as the principal causes of fisheries decline, it is highly likely that aquatic life toxicity also plays a major role in affecting the health of the Delta ecosystem for a number of key species. Too little effort is being made today to address the issue of aquatic life toxicity in the Delta and its tributaries.	Bill Jennings, Mike Lozeau, *Delta Keeper*	7/2/97	

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Topic	Comment	Person/ Organization	Date	Response
General	Beneficial use impairments are inadequately addressed in draft CALFED program and include, among others: aquatic toxicity, dissolved oxygen depletion, reduced quality of domestic water supplies, excessive eutrophication, chemical bioaccumulation, pathogenic impairment of contact recreation and sediment impairment (i.e., excessive accumulation, oil and grease, litter and toxicity).	Bill Jennings, Mike Lozeau, *Delta Keeper*	7//97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 28, 1997: The official decisions of use impairments are provided by the State Water Resources Control Board and the 304(b) report. Prepared follow-up response October 30, 1997 for review by Rick Woodard asking Jennings/Lozeau to determine what other reference is recommended for showing beneficial use impairments. November 11, 1997: Forwarded response to Jennings/Lozeau after approval from Rick Woodard.
General	CALFED should do more than encourage voluntary compliance with BMP's, it should encourage regulatory agencies to enforce such compliance. CALFED's water quality program must be addressed as solvable problem, not something that must be tolerated and mitigated.	*North Bay Contractors*	2/7/97	CALFED RESPONSE: A number of water quality actions identified by the Water Quality Technical Group do involve BMP's; therefore it is likely that CALFED will be acting to encourage their development and implementation. It is CALFED's plan to solve water quality problems that are reasonably correctable, realizing that it may not be possible to completely eradicate all problems. Until proven otherwise, however, we will proceed on the assumption that all identified problems are correctable.
General	Compliance with drinking water standard should compliment, not compromise protection and restoration of the Sacramento Delta. Preventing pollution and protecting water at its source is a far preferable and more cost-effective approach to ensuring safe drinking water than diverting still more water from the threatened Sacramento Delta. Such an approach enhances environmental quality and biodiversity while allowing natural filtration to purge remaining harmful contaminants from our water supply.	Marguerite Young, *Clean Water Action*	7/16/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment noted.

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Comments from Stakeholders
Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
General	I urge CALFED to consider groundwater quality protection an important component to the broader picture of the Sacramento River Delta water quality issues. Enclosures: materials regarding activities with the Sacramento River Watershed Toxics Control Program.	G. Fred Lee, *G. Fred Lee & Associates*	2/12/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment noted.
General	I would caution that before the process gets too far down the road, due consideration be given to the development of a broader based approach to developing potential solutions to many problems of water quality in the Bay-Delta as opposed to the development of narrowly defined steps that may not be practical or achievable.	Walter Ward *Modesto Irrigation District*	11/26/96	

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Comments from Stakeholders
Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
Mercury	There is an urgent need in the Central Valley and San Francisco Bay regions, as well as elsewhere int he state and country, to formulate approaches that can be used to determine the origin of mercury that leads to excessive bioaccumulation in aquatic organism tissue. There are not sufficient funds to control all mercury inputs to waterbodies to levels that potentially do not lead to excessive bioaccumulation based on the total mercury input. This is especially true for the Sacramento River system, Delta and San Francisco Bay. Under these conditions, there is need to prioritize the use of mercury input control resources so that the funds made available to control mercury inputs are directed to controlling those inputs with the greatest significance with respect to reducing the excessive bioaccumulation in mercury in organisms of concern to the public. Adoption of this approach will be critical to CALFED formulating a technically valid, cost-effective mercury control policy for the Delta and San Francisco Bay to the extent that the mercury problems in the Bay arise from input from the Sacramento River system/Delta. There is a general understanding today that the total mercury load to a waterbody or the total mercury content of sediments in a waterbody is a poor predictor of the bioaccumulation of mercury to hazardous levels. The basic problem is one of the relatively poor understanding of the aqueous environmental chemistry of various forms of mercury from various types of sources in various types of waterbodies as it leads to excessive bioaccumulation of mercury in fish tissue. Since we will not likely gain the necessary knowledge to put mercury control on a technically valid basis in the near future and since there is need to make decisions within the next few years on how to utilize the resources available and potentially available to control mercury-caused problems within the Sacramento River system, is watershed, the Delta and San Francisco Bay, there is need to formulate an approach which can be used in a weight-of-evidence, best professional judgment decision-making process to guide regulatory agencies CALFED and others on the allocation of resources for mercury control.	G. Fred Lee, *G. Fred Lee & Associates*	6/12/97	

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Comments from Stakeholders
Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
Mercury	The Mercury Technical Advisory Group should address the development of a guidance document that formulates a mercury control strategy. This strategy should indicate the minimum information needed to formulate policy on whether controlling mercury from a particular source is likely to be effective in reducing the magnitude of excessive bioaccumulation of mercury in edible fish tissue. This strategy should also include the presentation of a monitoring program that would develop the kinds of information needed to evaluate the impact of altering mercury loads from a particular source or group of sources on the excessive bioaccumulation of mercury in fish tissue from fish taken from a waterbody of concern. The expert panel approach, where the panel operates in a full, public peer review arena to develop weight-of-evidence, best professional judgment guidance and decisions on water quality management is the approach that should and must be adopted. There should be a proposal submitted to CALFED to support the development of an expert panel that would provide the guidance needed to formulate policy for mercury control where the resources made available are directed toward controlling the mercury inputs that are likely having the greatest impact on excessive bioaccumulation.	G. Fred Lee, *G. Fred Lee & Associates*	6/12/97	
Mercury	I have provided slides from a presentation regarding developing regulatory approaches for mercury in Cache Creek and the Delta. Outlined are key components of the program that CALFED should organize and support to begin to develop a technically-valid, cost-effective approach for managing the excessive mercury bioaccumulation problem that is occurring between Upper San Francisco Bay and possibly the Delta. [Enclosures in main file].	G. Fred Lee, *G. Fred Lee & Associates*	11/20/97	

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Comments from Stakeholders
Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
Mercury	In response to a question I asked during the October 1, 1997, meeting regarding how mercury is going to be addressed, Rick Woodard responded it would be addressed through the Monitoring Program in order to define the water quality problem caused by mercury. While he did not elaborate on the matter, this was the most encouraging things that I have heard out of the CALFED Water Quality Program since I became aware of this Program last January. CALFED should adopt the approach of first defining what real water quality use impairments are occurring in the Delta and its tributaries that affect Delta resources through a proper monitoring/evaluation program. As has been repeatedly pointed out to CALFED management, there is an inadequate database at this time to begin to reliably formulate a water quality management program for the Delta focusing on chemical constituents.	G. Fred Lee, *G. Fred Lee & Associates*	11/22/97	
Mercury	Darrel Slotton's presentation on mercury at the April 1, 1997 WQTG meeting provided the kind of data that demonstrates the point I have been trying to bring home to CALFED management in my discussions of the proposed programs for managing water quality problems associated with the Delta, namely that the approach now being used focusing on total constituents or even dissolved constituents is not technically valid. Large amounts of public funds can be spent trying to control the mercury problem that exists in the Delta where little or no impact will develop due to the fact that the funds are being spent without regard to basic aquatic chemistry , aquatic toxicology and hydrodynmics-mixing issues. The approach being used is a 1960s level of understanding with respect to using the science and engineering that has been available since that time in formulating technically valid, cost-effective water quality management programs.	G. Fred Lee, *G. Fred Lee & Associates*	5/8/97	

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Comments from Stakeholders
Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
Selenium	I am still waiting to see anyone demonstrates with any degree of reliability that the selenium inputs to the Delta are significantly adverse to Delta aquatic and terrestrial resources. It should not be assumed that the selenium problems for waterfowl in the Kesterson Basin are occurring in the Delta. As with other constituents of concern, there is need to first do the work necessary to define what real, significant water quality problems are likely occurring due to elevated selenium inputs to the Delta, then develop control programs for those inputs that are causing real water quality, waterfowl, etc., use impairments.	G. Fred Lee, *G. Fred Lee & Associates*	4/17/97	
Modeling	More detail should be made available on the modeling that will be used to estimate the drinking water costs associated with various source water quality scenarios. In particular, the source water quality estimates for the total organic carbon (TOC) and bromide that will be used as input values for the treatment cost model should be made available.	Elaine Archibald, *Archibald and Wallberg*	7/18/97	
Modeling	The salinity model developed by the Metropolitan Water District of Southern California (Metropolitan) is specific to Metropolitan's service area. Is CALFED going to expand the model? If not, how will CALFED estimate salinity impacts in other service areas (e.g., the South Bay Aqueduct or the North Bay Aqueduct)?	Elaine Archibald, *Archibald and Wallberg*	7/18/97	

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Comments from Stakeholders
Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
Organophosphorus Pesticides	While there are potentially significant toxic pulses of several organophosphorus pesticides passing through the Delta each spring, there is no understanding at this point of the ecological significance of these pulses. They are in the direction of being adverse to the beneficial uses of the Delta. The basis problem is that the toxicity is apparently restricted to a limited number of types of organisms. Before any control program is established for significant reduction of pesticide input, there is a need to define the real water quality use impairments associated with organophosphorus pesticides and for that matter other pesticides present in Delta waters and the Delta tributaries. Does the death of a limited number of types of zooplankton and possibly other organisms for several weeks per year significantly, adversely impact the fisheries and other aquatic life resources of the Delta? CALFED must fund studies of this type before it initiates its pesticide control programs.	G. Fred Lee, *G. Fred Lee & Associates*	4/17/97	

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Comments from Stakeholders
Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
Organophosphorus Pesticides	The pulses of organophosphorus pesticides that occur every spring that pass through the Delta have been sufficiently documented so that there is little justifiable question that there is likely to be substantial harm to Delta ecosystems. The magnitude of the toxicity and its persistence are such that there is little doubt that this is an area that CALFED should address. First, by convening a panel of experts to address the issue and then reviewing the adequacy of the current DPR and other programs in controlling organophosphorus pesticide input to the Delta. The "bodycount" is sufficient to aggressively pursue implementing highly effective organophosphorus pesticide dormant spray control programs to stop the airborne and waterborne transport that occurs for several weeks each winter. However, in reviewing the situation with respect to organophosphorus pesticides present in urban area stormwater runoff to the Sacramento River associated with home use of pesticides, where there is toxicity in the runoff waters due to organophosphorus pesticides, the necessary "bodycount" work has not been done to determine the fate and persistence of these chemicals (toxicity) in the Sacramento River system. This is a situation where a BPJ panel could advise CALFED on the information that is needed to establish whether there is likely a potentially significant adverse effect on aquatic life in the Sacramento River to justify implementation of a control program.	G. Fred Lee, *G. Fred Lee & Associates*	4/26/97	
Process	To effectively design and implement remediation measures, it is necessary to identify and quantify sources of acid mine drainage (AMD). However, data and models alone will not improve the health of the Bay-Delta system. Perform mathematical modeling only as necessary or feasible. Moderate control measures including surface water diversions, waste rock covers, and anoxic limestone can be constructed without extensive modeling.	Linda Mercurio *Mining Remedial Recovery Company*	11/27/96	

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Comments from Stakeholders
Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
Stakeholder Involvement	Only when the public is finally informed of all the threats to their drinking water will we have the level of citizen participation needed to safeguard our drinking water for the future.	Marguerite Young, Program Director, *Clean Water Authority*	7/16/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment noted.
Stakeholder Involvement	I recommend contacting additional representatives from active and inactive mining interests. The CALFED process could benefit significantly from additional expertise.	Linda Mercurio *Mining Remedial Recovery Company*	11/27/96	
Stakeholder Involvement	Will input from mining experts be sought in the development and evaluation of proposed control measures for mine drainage remediation?	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96	
Stakeholder Involvement	Ciba Crop Protection would like to be involved in this process, as one of our products, diazinon, is listed in your "Parameters of Concern".	Dennis Kelly *Ciba-Geigy Corporation*	12/4/96	
Stakeholder Involvement	It is the District's understanding that only a very few members of the Agricultural Water Quality Workgroup were available to participate in the composite ranking process due to scheduling conflicts. Given the importance of full and complete input from this group and our concerns, the District requests this group be reconvened and their input obtained upon CALFED's completion of the changes delineated above.	David Orth *Westlands Water District*	12/6/96	

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Comments from Stakeholders
Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
Studies	We must know what the problems are before we can fix them. The IEP Contaminants group has developed several proposed studies to investigate and document problem areas that merit immediate attention. Regarding the "likely" problem of organophosphate pesticide toxicity, a proposed study was developed to determine whether or not the problems in the various testing labs are in fact causing problems on resident populations and communities in the impacted waters. When completed, this will be one of few studies actually documenting contaminant effects on ecosystems. In areas where the specific cause of observed problems with various fish species is unknown, (including the "threatened" Delta smelt), studies were proposed to investigate and confirm an adverse role of contaminants, and to identify the specific contaminant(s) responsible for the problems. These proposed studies are the first step in providing the fundamental information for responsible remediation and management. The breadth of the contaminant-related problems which may be causing problems is symptomatic of the need for assessment of contaminant impacts at a higher level of organization. Establishing a framework for a more comprehensive assessment of this problem is the only way to achieve the type of fix that CALFED wants. To proceed with remediation of "high visibility" contaminants without understanding what the real contaminant problems are could be disastrous. Funding of the IEP's proposed studies to address problems of immediate concern should be CALFED's priority.	Scott Ogle, *Eco-Risk*	4/17/97	

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Comments from Stakeholders
Water Quality Program

Topic	Comment	Person/ Organization	Date	Response
Studies	Great volumes of data and information exist, but an overall understanding of how the system works and how it can be made whole is elusive. Much data has been gathered in the last 15 years. We are close as can be hoped for consensus that water flows need to be restored to the system, although the evidence is still mixed. However, what do we say with any surety as to whether fish populations are impaired by contaminants? Millions of dollars are spent on toxics monitoring, but only a few studies on a small number of fish species that really seriously address this question. There is great potential for doing the wrong thing. The laws and regulations on toxic materials cannot be assumed to provide guidelines to fixing problems with resources. There is a need for strong peer review in order to assure that ecotoxicological studies are as well focused and designed as we can make them.	Robert Spies, *Applied Marine Sciences*	4/21/97	
Studies	There is no evidence that urban area stormwater runoff is contributing constituents to the Delta or its tributaries that are adverse to the beneficial uses of the Delta's resources. In fact, there is substantial evidence to the contrary. Before any program to control chemical constituent inputs from urban area and highway stormwater runoff to the Delta is initiated, CALFED must fund reliable, comprehensive studies to define what, if any, real water quality use impairments are occurring in the Delta due to these inputs.	G. Fred Lee, *G. Fred Lee & Associates*	4/17/97	

D-035192

WATER QUALITY PARAMETERS OF CONCERN

CALFED
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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Process	I don't think each subteam used the same criteria for developing parameters of concern. Why are there no parameters of concern for salinity, chlorides, nutrients, and SAR for the San Joaquin and Sacramento rivers? They don't only cause problems for the Delta and the problems don't start in the Delta.	Jeanette Thomas, *Stockton East Water District*	11/26/96	
Process	My suggestion would be to look at the parameters in 2 groups: Basin Plan Parameters and Non-Basin Plan Parameters. This group could accept the basin plan parameters. A discussion should take place on those parameters included on this table, but not included in a basin plan and consensus reached on its inclusion for this table. Then this group needs to identify any areas which were not addressed (such as salinity for the San Joaquin River).	Jeanette Thomas, *Stockton East Water District*	11/26/96	
Process	The process needs to better integrate the parameters of concern from the 3 separate subgroups in such a way that does not allow a bias of a particular subgroup to outweigh the others input. I would suggest that the CALFED staff use information provided by the 3 subgroups and develop a standardized review of each item instead of attempting to develop a Atop ten list@. There is probably no equitable method of weighting the scores from each group, especially if individuals within each group ranked the list from a different direction, i.e. some with their group Ahat@ on and others Ahatless@.	Walter Ward, *Modesto Irrigation District*	11/26/96	
Process	In our opinion, the draft listings of Parameters of Concern and Acceptable Ranges do not meet the standards of process or science that already exist for that purpose and are appropriate for these pesticides. While this concern may not be applicable for potential sources of toxicity that lack a specific science based regulatory infrastructure or proprietary ownership by a registrant, it is an objections we feel compelled to reemphasize.	Bryan Stuart, *DowElanco*	1/10/97	

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Process	We do not agree with the approach used to identify the Parameters of Concern. A comprehensive process is now in place to both identify currently used pesticides associated with the surface water concerns and establish numeric targets, including water quality objectives, if appropriate. This is described in detail in the Management Agency Agreement between the DPR and the SWRCB. In our opinion, the draft listings of Parameters of Concern and Acceptable Ranges do not meet the standards of process or science that already exist for that purpose and are appropriate for these pesticides.	Bryan Stuart, *DowElanco*	1/10/97	
Process	We do not agree with the approach used to identify Parameters of Concern, or the search for Acceptable Ranges for different pesticides. In our opinion, the draft listings of Parameters of Concern and Acceptable Ranges do not meet the standards of process or science that already exist for that purpose and are appropriate for these pesticides.	*North Bay Contractors*	2/7/97	CALFED Response: The context within which these comments were made is not clear. In order to response adequately, we need to see the entire text and learn from whom the comments originate. *Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 24, 1997: Comment too general to act upon.
Process	In a January 13, 1998 memo from CALFED to the Parameter Assessment Team, a list of parameters to be discussed at the January 28, 1998, PAT meeting is included. From my experience, a number of these parameters, such as chromium VI, fall in a similar category as do a number of those already on the Parameter of Concern List, i.e., should be reliably monitored to determine whether there is the potential for a significant water quality problem. This monitoring should include an evaluation of potential target values or , more appropriate, approaches for establishing load reduction of toxic - available forms of constituents.	G. Fred Lee, *G. Fred Lee & Associates*	1/27/98	

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Process	With respect to the Request Form for Addition or Deletion to the CALFED Water Quality Parameter of Concern List, there are a number of Parameters of Concern already on the CALFED list which, in my opinion, would not stand up to the scrutiny set forth in this type of review. It is for this reason that I have recommended that the Parameters of Concern all be subjected to the same degree of review and that this effort not be restricted just to those that are to be added or deleted from the existing list.	G. Fred Lee, *G. Fred Lee & Associates*	1/27/98	
Process	I presume the Priority Water Quality Subject areas are draft, or potential RFP topics. I further presume that the list of specific contaminants came from CALFED water quality work group. It would be helpful to know how they chose them.	Bruce Thompson, *San Francisco Estuary Institute*	4/17/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Parameters of Concern were identified by the CALFED Water Quality Technical Group. Additional parameters may be added as new information becomes available.
Process	There is an absence of a clear implementation plan to address the questions of (1) the significance of listing a pollutant as a Parameter of Concern, (2) the use of target levels in water quality management activities, (3) the ability to delist a Parameter of Concern.	Thomas Grovhoug, *Larry Walker Associates*	1/27/98	

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Process	It is important that a clear statement of what is going to be done with target values be presented. I believe the Water Quality Technical Group is headed down a technically invalid path of conducting chemical constituent modeling to determine the load reductions that must occur to achieve the target values. With very few, possibly no exceptions, the degree of understanding of load of constituent - water quality impacts that exist within the Delta is so inadequate at this time that any attempts to do modeling of the types that was discussed a year ago to establish appropriate loads will be a waste of money. Several years of properly conducted, intensive work needs to be done on virtually all of the parameters of concern before first, it is possible to define that there is a real water quality problem associated with the parameter and second, define a target value which could serve as a basis for establishing the load reductions of those sources that contribute toxic, available forms of the constituent to the water body that is impacting the Delta's resources.	G. Fred Lee, *G. Fred Lee & Associates*	1/27/98	

D—035197

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Process	The Request Form for Addition or Deletion to the CALFED Water Quality Parameter of Concern list appears to be appropriate provided that those completing the forms provide detailed information on the PROBLEM. With respect to the "Parameter Characteristics," the fourth item, "The water quality problem caused by the parameter is generally recognized..." should not be a major issue. There is a problem with Chromium VI that is not generally recognized. Problems should be brought forth and allowed to stand on their own merit. Whether an agency or the scientific community generally recognizes the problem should not be an important issue. The third from last item, "Preponderance of data on the parameter shows concentrations exceed established criteria for the applicable medium..." is dangerous. We have already seen how CALFED management is using Long and Morgan sediment quality guidelines without proper public peer review. A characteristic that is not on this list that should be is "Accumulate within aquatic organism tissue (bioaccumulation) to levels that cause the organisms to be considered hazardous to higher trophic level organisms including man's use of the organism as food." Another characteristic that could be included that should be considered is impairing the aesthetic quality of resources, such as tastes and odors in fish. There are some constituents which, while not affect water use directly, affect the use of the resources by causing the fish to have obnoxious odors.	G. Fred Lee, *G. Fred Lee & Associates*	1/27/98	

D-035198

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Process	The CALFED Water Quality Technical Group and its sub-group of technical advisors, the Parameter Assessment Team (PAT), have devoted much time recently to discussing the process of listing water quality "parameters of concern." Over the past year, we have suggested that great care be used to ensure that CALFED listings of water bodies and contaminants of concern do not go beyond the federal Clean Water Act's Section 303(d)list, nor beyond those outlined in the Central Valley Regional Water Quality Control Board's Basin Plan. We also have advocated that a process be included to ensure that as the Basin Plan and 303(d) listings are updated, corresponding CALFED documents be revised to remain consistent. In other words, any CALFED reporting of listed contaminants or numeric targets should show a direct link to the site in question. There should not be a separate list of "CALFED numbers." Supporting this concept is the Regional Water Quality Control Board's January 23, 1998, decision to remove carbofuran from the 303(d) list, where it had been identified as impairing a 30-mile section of the Sacramento River. Only a month ago, the Parameter Assessment Team declined to make the same decision. More attention to the details of this process of listing parameters of concern is critical. We question whether CALFED should advance its work ahead of other agencies who regulate water quality. The USEPA has a long record of basing its action on a vast scope of literature, which can vary widely in scientific quality and relevance to site-specific problems. In short, once a water body goes on record as impaired, or a chemical constituent is listed as causing that impairment, or a numeric objective set, it can set off a process leading to more regulation, no matter what the original intention. Countering these efforts can be an extremely difficult and expensive task.	Jean-Pierre Cativiela, *California Rice Industry Association*	1/27/98	

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Process	We believe that the Parameter Assessment Team should be guided by the following during its discussions: • Any parameter of concern listing should have an appropriate basis in California regulations and should be updated as those regulations are updated, and in any case, should certainly not contradict those regulations. • Any numeric goal or objective should be based in a federal or State of California regulation actually applicable to the region in question, and • The CALFED parameter of concern listing should have some hope of realizing a CALFED goal. The last of these three points is critical. Many regulations exist to protect water quality and beneficial uses, but not all of them have an impact on the Bay-Delta ecosystem. Thus, the PAT should delete from its list of parameters of concern any item which it believes is not of consequence in meeting the goals of CALFED. This merely allows the appropriate regulatory agencies to continue doing their jobs without forcing CALFED to list pollutants or waterways that have no appreciable effect on the Delta ecosystem. Those parties who believe new listings are in order may continue to propose action to the appropriate regulatory authorities.	Jean-Pierre Cativiela, *California Rice Industry Association*	1/27/98	

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Addition - MAHs	Monocyclic aromatic hydrocarbons (MAHs) should be added based on Spies work with starry flounder and the Cooperative Striped Bass Study.	Phyllis Fox	9/22/96	1/28/98: Ms. Fox was not in attendance nor was a representative of Ms. Fox in attendance at the Parameter Assessment Team meeting. mid-December/97: Ms. Fox was invited to present or send a representative to present information and scientific evidence regarding request for addition of MAHs to the CALFED Water Quality Program parameters of concern at the January 28, 1998 Parameter Assessment Team meeting. 12/3/97: Ms. Fox was not in attendance nor was a representative of Ms. Fox in attendance at the Parameter Assessment Team meeting. 11/17/97: Ms. Fox was invited to present or send a representative to present information and scientific evidence regarding the request for addition of MAHs to the CALFED Water Quality Program parameters of concern at the December 3, 1997 Parameter Assessment Team meeting.

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Addition - Arsenic	Arsenic should be added. Arsenic water quality exceedences are reported in: Metals Implementation Project: Metals Monitoring of Central Valley Reservoir Releases: 1991-1992 (Goetzl and Stephenson, 1993). That report shows that 3 out of 4 samples collected from the upper Sacramento River at Dunsmuir and Delta and 2 out of 4 samples collected from the Pit River at Highway 299 and Bend exceeded the water quality objective of 5 ug/l. Frequent exceedences have also been reported in the lower watershed in the Coordinated Water Quality Monitoring Program.	Phyllis Fox	9/22/96	1/28/98: Ms. Fox was not in attendance nor was a representative of Ms. Fox in attendance at the Parameter Assessment Team meeting. mid-December/97: Ms. Fox was invited to present or send a representative to present information and scientific evidence regarding request for addition of arsenic to the CALFED Water Quality Program parameters of concern at the January 28, 1998 Parameter Assessment Team meeting. 12/3/97: Ms. Fox was not in attendance nor was a representative of Ms. Fox in attendance at the Parameter Assessment Team meeting. 11/17/97: Ms. Fox was invited to present or send a representative to present information and scientific evidence regarding request for the addition of arsenice to the CALFED Water Quality Program parameters of concern at the December 3, 1997 Parameter Assessment Team meeting.

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Addition - Simazine	Simazine (also known by the trade name Princep) should be considered by the Ecosystem Water Quality Group as a parameter of concern. We understand Simazine was considered by the Group for inclusion because it is widely detected, but that it was dropped because detected concentrations are less than the LC 50s for aquatic species. While we understand and agree with the basic logic, we believe the Groups consideration is incomplete. Our concern is with the potential impact of Simazine on aquatic plants which are an integral part of the ecosystem and have, in many instances, declined significantly in and upstream of the Delta for undetermined reasons. While we understand this situation may not have been considered to date, we feel it warrants thorough evaluation and inclusion on the list until such time this can be scientifically ruled out.	David Orth, *Westlands Water District*	12/6/96	1/28/98: Mr. Orth was not in attendance nor was a representative of Mr. Orth in attendance at the Parameter Assessment Team meeting. mid-December/97: Mr. Orth was invited to present or send a representative to present information and scientific evidence regarding request for addition of simazine to the CALFED Water Quality Program parameters of concern at the January 28, 1998 Parameter Assessment Team meeting. 12/3/97: Mr. Orth was not in attendance nor was a representative of Mr. Orth in attendance at the Parameter Assessment Team meeting. 11/17/97: Mr. Orth was invited to present or send a representative to present information and scientific evidence regarding request for the addition of simazine to the CALFED Water Quality Program parameters of concern at the December 3, 1997 Parameter Assessment Team meeting.

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Addition - Chlorine	Chlorine should be considered by the Ecosystem Water Quality group as a parameter of concern. We understand the Group may not have fully considered chlorine in its deliberations. Chlorine is acutely toxic to many aquatic organisms at very low concentrations and is widely used as a disinfectant in wastewater treatment processes. The District believes the Group should reconsider this matter.	David Orth, *Westlands Water District*	12/6/96	1/28/98: Mr. Orth was in attendance nor was a representative of Mr. Orth in attendance at the Parameter Assessment Team meeting. mid-December/97: Mr. Orth was invited to present or send a representative to present information and scientific evidence regarding request for addition of chlorine to the CALFED Water Quality Program parameters of concern at the January 28, 1998 Parameter Assessment Team meeting. 12/3/97: Mr. Orth was not in attendance nor was a representative of Mr. Orth in attendance at the Parameter Assessment Team meeting. 11/17/97: Mr. Orth was invited to present or send a representative to present information and scientific evidence regarding request for the addition of chlorine to the CALFED Water Quality Program parameters of concern at the December 3, 1997 Parameter Assessment Team meeting.
Addition - Bacteria and Viruses	The District believes bacteria and viruses should be reconsidered by the Group and left on the list until such time as they can be conclusively ruled out as a parameter of concern. Recent efforts by UCD to evaluate Delta smelt and the captive broodstock program for winter-run salmon at Bodega Marine Laboratory have experienced significant, in some cases near total, mortality as a result of various water-borne diseases in Delta and tributary waters.	David Orth, *Westlands Water District*	12/6/96	2/5/98: Pathogens are included in the CALFED Water Quality Program parameters of concer.

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Addition - Nutrients	Aqauatic plant nutrients that lead to excessive fertilization of the Delta should be considered as "constituents of concern" that need to be evaluated. There are excessive growths of attached algae and various kinds of water weeds that would be judged to be excessive in many other areas based on their advese impacts on recreational use. It also impairs the use of theDelta as a domestic water supply. It will be important for CALFED to address th eissue of the factors controlling the excessive growth of various types of noxious aquatic weeds in the Delta. It will likely be a combination of nitrogen and phosphorus, with nitrogen most likely limiting although since it is difficult to control nitrogen inputs, it may be that phosphorus could be made limiting through appropriately developed control programs, especially if the available nitrogen to phosphorus ratios during peak biomass are close to the stoichiometric composition of algae.	G. Fred Lee, *G. Fred Lee & Associates*	5/16/97	1/28/98: The Parameter Assessment Team recommended further clarification of nutrients in the CALFED Water Quality parameters of concern. The listing was recommended to read "Nutrients (total phosphorus, soluble reactive phosphorus, nitrate, nitrite, ammonia and organic nitrogen." 12/3/97: The Parameter Assessment Team recommended a clarification of nutrients on the CALFED Water Quality Program parameters of concern list. The listing was recommended to read "Nutrients (nitrate, nitrite, nitrogen, bioavailable phosphorus)." 12/3/97: The recommended clarification of nutrients by the Parameter Assessment Team was presented to the Water Quality Technical Group.

D-035205

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Addition - Boat Exhaust/ Gasoline Byproducts	We believe boat exhaust was not even considered by the Group. Given the byproducts of gasoline emission can be toxic and carcinogenic, this parameter should be added to the list until such time as detailed evaluation can eliminate it.	David Orth, *Westlands Water District*	12/6/96	1/28/98: Mr. Orth was not in attendance nor was a representative of Mr. Orth in attendance at the Parameter Assessment Team meeting. mid-December/97: Mr. Orth was invited to present or send a representative to present information and scientific evidence regarding request for addition of boat exhaust/gasoline byproducts to the CALFED Water Quality Program parameters of concern at the January 28, 1998 Parameter Assessment Team meeting. 12/3/97: Mr. Orth was not in attendance nor was a representative of Mr. Orth in attendance at the Parameter Assessment Team meeting. 11/17/97: Mr. Orth was invited to present or send a representative to present information and scientific evidence regarding request for the addition of boat exhaust/gasoline byproducts to the CALFED Water Quality Program parameters of concern at the December 3, 1997 Parameter Assessment Team meeting.

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Deletion - Carbofuran	Based on the Regional Water Quality Control Board's January 23, 1998, decision to remove carbofuran from the 303(d) list, where it had been identified as impairing a 30-mile section of the Sacramento River, it seems clear to us that carbofuran should not be designated by CALFED to be a parameter of concern in the Sacramento River or Delta, and we propose that carbofuran now be removed from the CALFED discussions of potential parameters of concern.	Jean-Pierre Cativiela, *California Rice Industry Association*	1/27/98	1/28/98: A request for the deletion of carbofuran from the CALFED Water Quality parameters of concern was presented to the Parameter Assessment Team. The PAT recommended further consideration of data from the Department of Pesticide Regulation prior to making a final recommendation. 12/3/97: A request for the deletion of carbofuran from the CALFED Water Quality parameters of concern was presented to the Parameter Assessment Team. The result of the following was discussion was a recommendation that carbofuran remain on the parameters of concern list.
Deletion - Carbofuran	On Friday, January 23, 1998, the Central Valley Regional Water Quality Control Board approved a revised 303(d) list for the Central Valley Region. As part of that action, they removed the pesticide *carbofuran* from its former listing as an impairment of the Sacramento River. This was based on historical water quality monitoring from both the California Department of Pesticide Regulation and the United States Geological Survey. These data show that carbofuran has not been detected in the Sacramento River above its performance goal value of 0.4 μg/L since 1989. The staff recommendation was: "Staff has reviewed the available carbofuran monitoring data for the Sacramento River from DPR and USGS. Because the monitoring data show carbofuran concentrations in the Sacramento River to be consistently below the performance goal, staff has recommended that the pesticide be removed from the list for the Sacramento River." The action was a direct result of the success of the DPR Rice Pesticide Management Program. At the December 3, 1997, meeting of the Parameter Assessment Team, we discussed removing carbofuran from the list of parameters of concern. We decided not to remove carbofuran from the list but did say we should reconsider if the 303(d) stats changed. In light of the Regional Board's action, I suggest we reconsider our decision.	Stephen D. Murrill, *S.D. Murrill & Co.*	1/27/98	1/28/98: Mr. Murrill made a request to the Parameter Assessment Team for the deletion of carbofuran from the CALFED Water Quality parameters of concern based on the CVRWQCB's updated 303(d) list . The PAT recommended further consideration of data from the Department of Pesticide Regulation prior to making a final recommendation.

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Comments from Stakeholders
Water Quality Parameters of Concern

Topic	Comment	Person/ Organization	Date	Response
Potential Parameters of Concern List - MTBE	Inge Werner of the Sierra Club has recommended that MTBE be added to the parameters of concern. I have considerable familiarity with MTBE as water pollutant and have accumulated literature beyond that referenced by Ms. Werner on this issue. It is my recommendation that MTBE, like a wide variety of other parameters, be included with chromium VI as a potential parameter of concern for which there is need for monitoring within the Delta to determine whether its concentrations occur at sufficient levels to be a threat to the aesthetic quality of drinking water, public health and aquatic life. The problem of MTBE universally, thus far, are aesthetic quality, i.e., tastes and odors, in water supplies. Contrary to the implications, there is considerable information which indicates that it is not a significant threat to public health or aquatic life. On January 26, 1998, the American Water Works Association newsletter announced that the USEPA has recommended MTBE levels of 20 to 40 μg/L in domestic water supplies based on objectionable tastes. According to the USEPA, these recommended values are "about 20,000 to 100,000 (or more) times lower than the range of exposure levels in which cancer or non cancer effects were observed in rodent tests."	G. Fred Lee, *G. Fred Lee & Associates*	1/27/98	1/28/98: The Parameter Assessment Team reviewed the information provided regarding the addition of MTBE to the CALFED Water Quality Program parameters of concern and recommended that MTBE be placed on a "Potential Parameters of Concern" list. 1/14/98: Inge Werner forwarded information regarding the addition of MTBE and asked that it be provided to the Parameter Assessment Team on January 28, 1998.

D-035208

WATER QUALITY TARGETS

CALFED
BAY-DELTA
PROGRAM

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
General	Is there any process to reevaluate ranges?	Unknown	1/23/97	Rick's Response: Yes, we are currently discussing how the ranges will be used at a programmatic level. We will be soliciting stakeholder input.
General	The adoption of "target levels" for parameters of concern, which go above and beyond the list of existing water quality standards is a major concern to me. Once blessed by CALFED and the Parameter Assessment Team, such numeric target levels will take on a life of their own and will, over the years, be given more weight than was originally intended. The target values will be presumed to hold special significance, despite the informal nature of the current procedures for adoption of these "target levels" by CALFED. Therefore, *it should be anticipated that these target levels would be used in the future either as the equivalent of water quality numeric standards or as the basis for interpretation of narrative water quality standards.* These concerns are particularly applicable to the sediment and tissue-based target levels, since no formal sediment or tissue-based standards exist in California. I strongly recommend that target levels be restricted to existing water quality standards. This position is consistent with previous statements by CALFED staff that it is not CALFED's intent to set new regulatory standards. If CALFED goes beyond the use of existing standards in setting its "target levels," the process for establishing the target levels must be upgraded significantly to include augmentation and formalization of the PAT, additional scientific documentation to support proposed target levels, scientific peer review, and expanded public participation. The current PAT structure is not adequate for handling the equivalent of a standard setting process.	Thomas Grovhoug, *Larry Walker Associates*	1/27/98	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
General	A "Suggested Criteria for Developing Water Quality Targets" was part of the PAT meeting materials for the December 3, 1997, PAT meeting. It is stated that these materials were extracted from minutes, handouts and reports by the Ecosystem, Agriculture, and Urban Subteams of the CALFED Water Quality Program. This issue needs to receive a comprehensive review since, as being developed now and discussed herein, CALFED is headed down a technically invalid approach and could readily result in massive waste of public and private funds chasing constituents because of an inappropriate-selected criterion, such as the Long and Morgan sediment quality guideline. CALFED Water Quality Program management and the various subteams have included in the list of water quality targets parameters that are not technically valid, such as the National Academy of Science guidelines for tissue concentrations. If the National Academies of Science and Engineering are asked whether those are valid guidelines that are applicable today, you will find that they are not valid. The sediment targets listed involving Long and Morgan co-occurrence values are not appropriate guidelines for CALFED programs. These so-called guidelines are based on well-known technically invalid approaches to estimate whether a constituent in a sediment is toxic. A far more reliable, readily implementable approach is to directly assess toxicity. This approach has bee used since the late 1970s by the USEPA and Corps of Engineers in regulating contaminated sediments associated with dredging projects. It should be used in the Delta. No attempt should be made to use chemical concentrations in sediments to estimate the critical concentrations of chemicals that are of concern because of their toxicity to aquatic life.	G. Fred Lee, *G. Fred Lee & Associates*	1/27/98	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
General	The proper approach for establishing target ranges should be based on finding a concentration of constituents in excess of the USEPA criterion being used as a trigger to initiate site-specific studies to determine whether the constituent of concern is in a toxic/available form that is potentially adversely impacting the beneficial uses of the water body being investigated. If CALFED persists with its current approach of trying to mechanically use the USEPA criteria as a basis for establishing remediation goals, it will find that the Water Quality Program will justifiably be severely criticized because of its lack of technical validity. It is important to understand that CALFED is not trying to make its own criteria or standards to replace USEPA values. It will be, if a technically valid approach is adopted, developing appropriate conducted site specific investigations to determine whether public funds need to be spent controlling a particular constituent based on having found that the constituent is causing a real water quality use impairment in CALFED waters.	G. Fred Lee , *G. Fred Lee & Associates*	8/15/97	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
General	The CVRWQCB has, as one of its Basin Plan objectives, control of toxicity in ambient waters. CALFED has as a constituent of concern "unknown toxicity." It would seem appropriate that the CALFED approach for assessing the adequacy of constituent of concern control programs for potentially toxic constituents is the use of the USEPA standard three-species test as well as the chemical test and, to the extent that funds were available, developing aquatic organisms assemblage information. At the August 6th WQTG meeting, a best professional judgment weight of evidence triad approach, where appropriate conducted chemistry, biological effects based assessments such as toxicity tests and information on the numbers, types and characteristics of the organisms present relative to the habitat characteristics and reference areas with similar habitat, be used to assess whether there is a water quality problem due to potentially toxic chemicals. These types of tests are legally defensible and should be used by CALFED as a basis for implementing its Water Quality Program objectives of controlling potentially toxic chemicals and unknown toxicity. This is a far more technically valid approach than trying to control aquatic life toxicity based on chemical measurements where it is necessary to try to extrapolate from a chemical measurement to a water quality impact of concern to people. Chemical concentrations are not a valid tool for evaluating toxicity. They are an indicator of potentially toxic chemicals. While there are questions about the interpretation of toxicity test results with respect to such issues as whether the toxicity test species (the three-standards species) are representative of all species that are present in the Delta, these questions are small compared to the magnitude of the justified well-known question about the validity of relying on chemical concentration-based number as a goal. At least with toxicity testing, the issue of biological effects has been addressed to a considerable extent.	G. Fred Lee, *G. Fred Lee & Associates*	8/18/97	

D-035213

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
General	No one is advocating the abandonment of measurement of chemical concentrations. We are advocating that CALFED not mechanically use chemical concentrations as the remediation goal - target objective. There is concern that toxicity measurements be included in the evaluation of CALFED program effectiveness as a parameter for potentially toxic chemicals. Failure to do so will clearly cause CALFED Water Quality Task Group activities to be judged significantly technically deficient and will lead to a potential effort to redirect CALFED to focus on real water quality issues as opposed to those that are contrived out of overly protective approaches. A failure to routinely measure toxicity will also mean that the CALFED Water Quality Program will fail to fulfill its obligation to adequately and reliably address unknown toxicity as well as the CVRWQCB Basin Plan requirements of no toxicity in ambient waters. CALFED's advocating of chemically-based water quality standards as legally defensible goals has limited applicability to a few wastewater dischargers in the Delta watershed. Even here it may be years before the approach is legally defensible. There is need for CALFED to develop legally defensible goals for the regulated community such as urban stormwater dischargers as well as the vast unregulated community of non-point source dischargers. Biological effects-based test approaches using toxicity tests and bioaccumulation are legally defensible goals that can be readily implemented. They should become the target objectives for evaluating CALFED's Water Quality Program effectiveness.	G. Fred Lee, *G. Fred Lee & Associates*	8/18/97	

D-035214

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
General	Water quality objectives and criteria are the yardstick used by regulatory agencies; however, most people question the ecological validity of most water quality objectives. Good studies could establish meaningful environmental guidelines for contaminant concentrations. There are no regulatory sediment or tissue concentration criteria. However, several sediment quality guidelines, such as NOAA's Effects Range Concentration (ERL, ERM), apparent effects thresholds (AET), or EPA's draft sediment quality criteria do exist that could be used for sediment comparisons. For tissues, the State Board uses Median Tissue Residue Levels (MTRLs), but USFDA guidelines, EPA screening values, Median International Standards, as well as literature values for tissue levels that cause effects exist that could be used. Again, good studies could determine region specific concentrations related to ecological effects.	Bruce Thompson, *San Francisco Estuary Institute*	4/17/97	
General	Before spending funds for constituent control to meet either an overly-protective or underly-protective standard, it is important to evaluate the reliability of the standard and the potential for it to be changed to a more reliable value in the foreseeable future.	G. Fred Lee, *G. Fred Lee & Associates*	2/12/97	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
General	A basic problem of CALFED adopting water quality standards as remediation goals, in which CALFED programs are assessed in terms of achieving the standard, is that there are no statewide water quality standards (objectives) in California today. The USEPA, under the National Toxics Rule, has recently promulgated proposed standards. However, it will likely be years before these standards are actually adopted and implemented into permits. Meanwhile, CALFED will have to formulate WQTG programs. It is my understanding that it will likely be a number of years before the new standards will be legally defensible standards for the few regulated dischargers to which these standards apply. Many municipalities and industries find that the USEPA's approach for conducting economic analyses is inadequate. This approach could be challenged in the courts and voided by the courts. Therefore, there is considerable uncertainty as to when the National Toxics Rule based criteria will become legally defensible standards in California that are applicable to NPDES permits CALFED could readily find itself in a position of trying to implement chemical constituent control programs that are not in accord with legally defensible requirements by focusing on chemically based criteria. Another aspect is the USEPA has proposed to change the Independent Applicability Policy through its current announced proposed rulemaking for water quality standards. If this policy is changed, as it should be, then the chemically based water quality criteria/standards will not be the legally defensible requirements. Instead, they would be used as trigger to allow the regulated community to determine whether the exceedance of a criterion represents a real water quality use impairment. This is the approach that CALFED should use in establishing water quality remediation goals.	G. Fred Lee, *G. Fred Lee & Associates*	8/18/97	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
General	The suggestion that achieving water quality targets must be demonstrated, is, based on the meetings I have attended, an inappropriate approach as it is being formulated. The targets as formulated now are chemical concentrations in the Delta or at a particular location. This assumed that there is a well defined link between a concentration of a chemical and real water quality problem of significance to the public within the Delta. As I indicated at the Water Quality Task Force subcommittee meeting that while today, exceedance of a water quality standard from an administrative perspective, defined as a water quality use impairment, it is well known that in many cases this exceedance is an administrative exceedance that is not related to a defined water quality use impairment. For a water quality use impairment to occur with respect to aquatic life resources, there should be reasonable evidence that the numbers, types and characteristics of desirable forms of aquatic life are being adversely impacted by the constituent of concern. A significant number of exceedances that are occurring today relate to the USEPA's adoption, without public review, of it's Independent Applicability Policy which mandates that chemical concentration criteria must be met even if proper investigation of aquatic life resources and biological impacts shows that there are no discernable adverse impacts on aquatic life resources. While it is not possible to reliably state thee is no adverse impact associated with the presence of a constituent in a water, in the CALFED situation, the funds available must be directed toward controlling real pollutant inputs to the Delta and through the Delta to the Bay and to water supplies that use the Delta as a source. Once the major water quality use impairments have been addressed, then residual funds should be used to try to identify other more subtle problems of potential significance to Delta resources.	G. Fred Lee, *G. Fred Lee & Associates*	4/17/97	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
General	I have attached comments on documents passed out at the October 1, 1997, Water Quality Technical Group meeting. There continues to be significant problems with the materials developed in the Water Quality Program concerning chemical constituent criteria and proper assessment of water quality. It appears that against the recommendations of a number of individuals knowledgeable in the topic area, the CALFED Water Quality Program is persisting with its specific chemical concentration approach in which some value, such as the California Toxics Rule criterion will be used as the goal for formulating CALFED chemical constituent management programs. As I and others have repeatedly pointed out, this approach is technically invalid and can readily result in massive waste of public funds related to the overly-protective nature of USEPA water quality criteria including the California Toxics Rule criteria.	G. Fred Lee, *G. Fred Lee & Associates*	11/20/97	
General	I have concerns about using numerical parameters that are not in the basin plan. I need a better understanding of how these parameters will be used before I could consider accepting them.	Jeanette Thomas, *Stockton East Water District*	11/26/96	
General	I have concerns about using MCLs specified in Title 22 of the California Code of Regulations which apply to drinking water (after treatment in the case of surface water) for raw water parameters. I agree that the closer the raw water is to the MCL the easier it is to produce drinking water that meets these criteria. With treatment, water above these criteria can also be acceptable.	Jeanette Thomas, *Stockton East Water District*	11/26/96	
General	The Ag Sub-Team wanted the ag water parameters set for the most sensitive crop grown in the region. The ag parameters are for the Delta only. Ag parameters need to be detailed for San Joaquin and Sacramento rivers.	Jeanette Thomas, *Stockton East Water District*	11/26/96	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
General	It is too early in the process and probably not the charge of CALFED to develop numeric standards. The outlined approach is too specific. At this point in the planning process it would be better to capture a broad range of parameters and not identify specific concentrations.	Walter Ward, *Modesto Irrigation District*	11/26/96	
General	The water quality parameters of concern should be refined into goal and objective statements, not "shall not exceed" language for specific parameters or ions.	Walter Ward, *Modesto Irrigation District*	11/26/96	
General	In addition, and perhaps more importantly, the water quality parameters will have to be measurable in order to weigh various alternatives against one another and must be practical and achievable in the field. Otherwise, the work is too detailed to be implemented and it will be very difficult to achieve concurrence with the group.	Walter Ward, *Modesto Irrigation District*	11/26/96	
General	Many of the values listed in the table are not legally adopted objectives and, as such, have not been deemed acceptable from a legal, scientific or policy perspective. The process of adopting legally enforceable objectives forces consideration of numerous factors, including but not limited to scientific validity and/or uncertainty, risk level, attainability and economic effect. First footnote in the table should clearly state which values are legally enforceable objectives and which are not. The footnote should also state that values which are not objectives should not be used to imply beneficial use impairment or adverse water quality impacts.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	
General	CUWA also believes that all values in the table should be expressed as less than or equal to the subject number (except pH and DO).	Byron Buck, *CUWA*	12/4/96	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
General	The District is concerned with the language in many of the footnotes linked to the "ranges" in the list. In many instances these footnotes state "shall not be greater than". This is an absolute term and does not express the flexibility of a "range". The District requests such absolute language be removed unless it only applies, and is so noted, to the lower limits of acceptable ranges to be determined.	David Orth, *Westlands Water District*	12/6/96	
General	After extensive comment and deliberation between several State agencies, a comprehensive process is now in place to both identify currently used pesticides associated with surface water concerns and establish numeric targets, including water quality objectives if appropriate. This is described in detail in the Management Agency Agreement between the DPR and the SWRCB.	Bryan Stuart, *Dow Elanco*	1/10/97	
Bromide	There are a number of uncertainties in the estimate of the bromide concentration limit, which is assumed to correspond to a bromate concentration of 0.005 mg/l in the treated water. The relationship between bromate concentration in the treated water and bromide concentration in the source water is quite variable, even among different CUWA facilities using the same source water. There are also very little data at low bromide concentration.	Richard Denton, *Contra Costa Water District*	1/14/97	
Chloride	CUWA recommends that CALFED adopt a desirable target for chloride of a 10 year average of 55 mg/L and a monthly average of 110 mg/L. This will comply with the State Water Project (SWP) contract objective.	Byron Buck, *CUWA*	12/4/96	
Chlorpyrifos	CALFED should recognize that any Water Quality Acceptable Range for chlorpyrifos developed at this point in time is provisional and may need adjustment as the database is clarified.	John Jachetta *Dow Elanco*	1/10/97	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
Chlorpyrifos	Chlorpyrifos is subject to rapid dissipation in the aquatic environment. In the case of chlorpyrifos, the short half-life and sporadic pattern of detection in the Sacramento and San Joaquin Rivers may support an acute criterion; however, the establishment of interim chronic values, in the absence of freshwater data or exposure information is not supportable.	John Jachetta *Dow Elanco*	1/10/97	
Chlorpyrifos	DowElanco ecotoxicologists, using a comprehensive database and stringent interpretation of USEPA Tier I guidance, have developed a chlorpyrifos FAV of 0.129 µg/L. We do believe that the development of water quality standards using the probabilistic approach outlined by the Aquatic Risk and Mitigation Dialogue Group is more consistent with current science and may be considered as an alternative goal for the CALFED Water Quality Team. Such an approach develops a more realistic risk assessment by looking at probable exposure in addition to potential effect. In addition, the development of a more proactive plan, such as that proposed by the Western Crop Protection Association for the Univ. of Calif. system Best Management Practice research, education, and outreach program may be a more productive use of CALFED resources. If, however, CALFED chooses to use a USEPA Tier I standard, we suggest that the 0.129 µg/l value be adopted as the interim WQAR for chlorpyrifos.	John Jachetta *Dow Elanco*	1/10/97	
Chlorpyrifos	The CALFED Water Quality Team appears to have chosen the interim freshwater Water Quality Criteria developed by the CDFG to define the proposed acceptable ranges for chlorpyrifos. Although these guidelines provide a method for the determination of both acute and chronic criterion, DFG developed an interim chronic value only; this value was described as interim because of insufficient data. While the short half-life of chlorpyrifos (>90% degradation within 48 hours) and sporadic pattern of detection in the Sacramento and San Joaquin Rivers may support an acute criterion, the establishment of a chronic value, in the absence of exposure information, is not supportable.	John Jachetta, *Dow Elanco*	1/10/97	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
Chromium VI	The chromium VI standard is a factor of 10 too high based on what is known about the toxicity of chromium VI to key forms of aquatic life such as zooplankton. It is important for CALFED to incorporate this knowledge into its formulation and implementation of its water quality management programs and not mechanically use existing standards as a basis for formulating management goals.	G. Fred Lee, *G. Fred Lee & Associates*	2/12/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 24, 1997: Comment noted.
Copper	To assume that the current water quality standard for copper is to be used without questioning it is highly inappropriate and contrary to wise use of public funds. Most of the forms of copper in aquatic systems are non-toxic and non-available. It is inappropriate to use Prop. 204 funds to reduce copper without regard to whether copper is present in a toxic, available form and therefore significantly adverse to the beneficial uses of a water body is inappropriate.	G. Fred Lee, *G. Fred Lee & Associates*	2/12/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 28, 1997: Prepared follow-up response to DFG for review by Rick Woodard asking for their response. The issue may be discussed at the next Water Quality Technical Group meeting on December 3, 1997. November 1, 1997: Forwarded response after review and approval by Rick Woodard.
Copper, Cadmium, Zinc	Adjust the acceptable ranges downstream of Hamilton City. Currently, the EPA guideline for these metals are applied to the delta, San Joaquin River, and Sacramento River downstream of Hamilton City, while CVRWQCB limits are applied upstream of Hamilton City. As a result, acceptable cadmium concentrations are an order of magnitude higher downstream of the Highway 32 bridge than upstream of the bridge. Should use a less arbitrary and more digital application of these standards to better reflect the beneficial uses of the bay-delta system.	Linda Mercurio, *Mining Remedial Recovery Company*	11/27/96	
USEPA Criteria	The EPA criteria shown in the table are not legally enforceable in the Sacramento, San Joaquin or Delta at the present time. Such criteria are expected to be proposed in 1997 by EPA as part of the California Toxics Rule. Enforceable standards based on these EPA criteria will not be adopted in California until late 1997 or 1998.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	

D-035222

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
Hardness Equations	Footnote c is incorrect. Hardness concentrations in mg/l should read: $Cu = e^{(0.905)(\ln \text{hardness}) - 1.62} \times 10^{-3}$ $Zn = e^{(0.830)(\ln \text{hardness}) - 0.289} \times 10^{-3}$ $Cd = e^{(1.160)(\ln \text{hardness}) - 5.777} \times 10^{-3}$	Linda Mercurio, *Mining Remedial Recovery Company*	11/27/96	
Mercury	Consider use of the FDA action level of 1.0 mg/kg for mercury in fish tissue.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	
Pathogens	To balance disinfection requirements for controlling pathogens with the production of disinfection by-products, sources of pathogens should be located away from drinking water intakes. Desirable targets of less than 1 oocyst/100L for *Giardia* and *Cryptosporidium* in raw water supplies should be used by CALFED in evaluating actions.	Byron Buck, *CUWA*	12/4/96	
Pathogens	Due to the possibility of more stringent future regulations on both pathogens removal (especially Cryptosporidium) and disinfection by-products, urban water agencies might be required to turn to ozonation, and a source water concentration as low as 0.050 mg/l bromide might be required to meet these future regulations.	Richard Denton, *Contra Costa Water District*	1/14/97	

D-035223

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
Sediments Targets	The Long and Morgan, MacDonald and other co-occurrence-based sediment "quality" guidelines are unreliable as a means of properly designating sediment contaminated areas that need attention. At the national SETAC meeting, several speakers presented data which demonstrated that greater reliability in predicting sediment toxicity can be achieved by flipping a coin than can be achieved by using Long and Morgan co-occurrence based values. CALFED is making a massive error in incorporating Long and Morgan (NOAA) values as the basis for establishing critical concentrations of chemical constituents in aquatic sediments. Even Ed Long was forced to admit that his values are not NOAA values. The issue of the approach that should be used by CALFED to determine when there is need for concern about chemical constituent accumulation in sediments needs to be discussed where ultimately CALFED management reverses its position that Long and Morgan values have credibility for determining excessive concentrations of chemical constituents in sediments that are adversely impacting the beneficial uses of water bodies. [Enclosures in binder.]	G. Fred Lee, *G. Fred Lee & Associates*	11/20/97	
Sediment Targets	Consider use of ERMs or other sediment values in lieu of ERLs. If ERLs are shown, show a range consisting of ERL to ERM sediment values.	Jerry Troyan, *Sacramento Regional Wastewater Treatment Plant*	11/27/96	
Selenium	Selenium Action Level for SFWQCB = 0.06 - 1.1 µg/l	Phyllis Fox	9/20/96	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
TDS	TDS levels in Delta water exports vary significantly, ranging from approximately 100 mg/L to over 450 mg/L during the 10 years ending 1995. DWR recently estimated that TDS levels in Delta inflows could increase by as much as 17.5 mg/L by 2020 due to increased wastewater discharges associated with population growth in the Central Valley drainage area. Groundwater pump-in programs along the California aqueduct, to the extent they occur in the future, are another source of TDS which can affect SWP deliveries. CUWA members are concerned that such increases and continued variability in TDS levels may 1) increase demand for Delta water which could otherwise be avoided, 2) adversely affect local resource programs such as water recycling and groundwater management and 3) cause significant economic impacts due to water usage. Consequently, CALFED needs to establish TDS (chloride) targets in the planning process for a Bay-Delta solution.	Byron M. Buck, *CUWA*	5/16/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Parameter Assessment Team recommendations have been used.
TDS	CUWA recommends that CALFED adopt a desirable target for TDS of a 10 year average of 220 mg/L and a monthly average of 440 mg/L. This will facilitate local wastewater reclamation and conjunctive use projects and comply with the SWP contract objective.	Byron Buck, *CUWA*	12/4/96	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
TDS	CUWA previous recommended to CALFED a desirable long-term TDS target of 220 mg/L (55 mg/L chloride) and a desirable monthly average target of 440 mg/L (110 mg/L chloride) for Delta water. CUWA is beginning to develop intermediate-term desirable salinity targets (e.g., 6 month, 1 year and 2 year targets) necessary for minimizing variability and reducing adverse impacts. The recommended intermediate-term salinity targets will be provided to you once they are developed. CUWA urges CALFED to adopt a salinity objective for its Program alternatives consistent with CUWA's recommendations. CUWA also requests that CALFED develop "confidence limits" around the monthly, intermediate, and long-term salinity targets. Reliable estimates of future TDS concentrations are necessary for Delta water users to plan effective water quality strategies regarding recycling and conjunctive use of local and imported supplies.	Byron M. Buck, *CUWA*	5/16/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Numbers have not been provided to date. Detailed modeling is needed for confidence limits and such models are not available to accomplish such confidence limits.
Temperature	The document proposes a standard of < 56°F for the river reach from Keswick Dam to Hamilton City. The 1993 Winter Run Salmon Biological Opinion issued by NMFS for operation of the Central Valley Project contains temperature control criteria between Keswick and Red Bluff Diversion Dam--many miles upstream of Hamilton City. ..... Since 1992 it has been demonstrated time and again that it is impossible to consistently achieve, much less maintain < 56°F even at RBDD. ..... The proposed criteria is unattainable and should be deleted, and the 1993 Biological Opinion should be cited as the appropriate level of temperature control on the upper Sacramento River.	David Orth, *Westlands Water District*	12/6/96	
Temperature	Temperature standards farther downstream on the Sacramento River are even farther beyond the control of the state and federal water projects than that described above. Again, temperature in the lower river, such as I Street Bridge and Freeport are a function of climate and natural hydrology. Any temperature standards are completely beyond the ability of the projects to control or regulate and therefore arbitrary and capricious and should be eliminated in their entirety.	David Orth, *Westlands Water District*	12/6/96	

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Comments from Stakeholders
Water Quality Targets[1]

Topic	Comment	Person/ Organization	Date	Response
Temperature	For the San Joaquin River temperature standard at Vernalis we restate our comments above. The State Water Resources Control Board has determined in the past that it is unreasonable to try to control temperature in the lower San Joaquin River.	David Orth, *Westlands Water District*	12/6/96	
Temperature	The temperature differential standard for the area west of Antioch Bridge, providing for a maximum allowable differential of discharge waters of <5°C (11°F) may be inadequate. Several aquatic species, such as Delta and long fin smelt, are extremely sensitive to thermal shock as demonstrated in studies at UCD. The District recommends that an allowable differential be set at <3°C (5.4°F) to provide adequate protection of sensitive native species at critical life stages.	David Orth, *Westlands Water District*	12/6/96	
Turbidity	CUWA recommends 50 NTU as a desirable target for turbidity to improve treatment reliability. Use of the maximum contaminant level of 0.5 or 1.0 NTU is not appropriate for raw water supplies.	Byron Buck, *CUWA*	12/4/96	

1. Comments on water quality targets may also be found in other sections of this Comment and Response Summary.

WATER QUALITY ACTIONS

CALFED
BAY-DELTA
PROGRAM

DRAFT
Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
General	My perception of the CALFED approach is that funding is being directed towards remediation without any actual understanding of whether or not the specific contaminants being addressed are in fact causing adverse effects on important fish (or invertebrate) populations in these waters. I feel very strongly that this is putting the cart before the horse. As a result, CALFED is at risk of wasting money by taking actions where none may be needed and by not taking actions where the need may be great. We must know what the problems are before we can fix them.	Scott Ogle, *Eco-Risk*	4/17/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.
General	Consideration should be given to granular activated carbon (GAC). Some believe it is not adequate to treat cryptosporidium. In fact, GAC operated as part of the treatment train with conventional filtration and either ozone (with appropriate bromate controls) or chlorine/chloramines and enhanced coagulation may take care of both cryptosporidium and disinfection byproduct problems. The use of new generation, lower cost membranes should also be evaluated.	Erik Olson, Ronnie Cohen, *Natural Resources Defense Council*	4/2/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Comment noted. A list of treatment measures does not preclude adding measures as part of the adaptive management process. Any new information or advances in science can be considered through the adaptive management process.
General	We need to take action based upon our best professional judgement with the intent that systems be protected prior to their reaching a level of perturbation from which they cannot regain their old structure. Awaiting a body count may give us a higher level of confidence we are doing the right thing but at some point there is nothing left to count and we may still not have identified the causative mechanism. We know flows and exports affect it, there are lethal levels of pesticides seasonally present, and certain metals are also of concern. The problem is that changes in any of these areas affect some user group and the least intrusive course to follow is simply conducting additional studies. From a people perspective, this is a nice approach but it does not do much for the ecosystem.	Howard Bailey, *EVS Consultant*	4/25/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Comment noted.

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
General	Let's prioritize and proceed sensibly. There is a lot of middle ground between what CALFED's draft proposed and studying the system "to death." The next step is a well thought out way to do that.	Bruce Thompson, *San Francisco Estuary Institute*	4/25/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Comment noted.
General	We need to set priorities. We already know there are biological effects and a good idea of the major potential causes of such declines. The problem is we have no real way to separate out the contributors to the declines. In fact, some may be operable only on some species and only under some conditions. Since this is a multivariate problem that could take years to resolve to everyone's satisfaction, wouldn't it be better to act to reduce the effects of the activities that appear to have the potential to be contributing?	Howard Bailey, *EVS Consultant*	4/26/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.
General	Implementation of the many actions contained in the Water Quality Program will be costly so CALFED needs to proceed with actions that will provide the most significant benefits to the ecosystem and improve urban and agricultural water quality. Performing monitoring, assessment and research in conjunction with those actions will assist in prioritizing and/or modifying the remaining actions.	Dan Nelson, Byron Buck, *Ag/Urban Water Caucuses Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Comment noted. We agree. CMARP is being developed for short-term and long-term monitoring. A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.

D-035230

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
General	It is difficult and may not be cost effective to take action prior to understanding the water quality problems of the Delta and its watershed; however, CALFED needs to find the proper balance between monitoring and taking action. We believe there is sufficient justification to proceed with control measures for some Water Quality Program actions (e.g., mine abatement, control of dormant spray pesticides); however, many of the Water Quality Program actions need to be monitored and adjusted based on monitoring program results (e.g., unknown toxicity, biological effects of selenium). For adaptive management to be successful, clear objectives and measurable criteria for assessing the effectiveness of actions need to be identified.	Dan Nelson, Byron Buck, *Ag/Urban Water Caucuses Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Comment noted. CMARP is an adaptive management tool and criteria will exist for establishing objectives and performance measures related to the program.
General	CALFED should be aware of problems in North Bay Aqueduct with things such as organic carbon, turbidity, several metals and Delta smelt habitat in Barker Slough area which has restricted pumping in the past.	*North Bay Contractors*	2/7/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* CALFED RESPONSE: The State Water Project Sanitary Survey, recently completed by the Department of Water Resources, does identify the waters of North Bay Aqueduct as being subject to degradation by organic carbon, metals, turbidity, and pathogens.
General	The linkage between the individual sub-groups water quality problem statements and objective statements seems to have broken down when compared to what has been compiled into the proposed 32 action items.	Walter Ward, *Modesto Irrigation District*	11/26/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: The Water Quality Program has been responsive to stakeholder comments and will continue evolve.

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
General	Overall, the District feels the outcome of this effort is sufficiently important to warrant modifying the list, taking the extra steps described above and recirculating for additional review and reconsideration.	David Orth, *Westlands Water District*	12/6/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: The actions have been modified and reviewed on numerous occasions by the stakeholders. The actions will continue to evolve in response to stakeholder comments.
Process	I would suggest that CALFED state what "reduction" means. Could it be interpreted to broadly to infer that planning studies to assemble a framework outlining a plan of attack on each issue, or other special studies were welcome, or does it really have to be an engineering or technology type solutions? Studies of all three types could proceed **IF** they would obviously become part of an overall plan to determine which contaminants were in fact causing the biggest problems, where they came from, and what to do about them. The PWT has spent a considerable amount of time developing studies in this context. Although our process has been somewhat independent of CALFED's, our goal is the same: Understanding what the problems are in order to affect "reduction." The PWT's studies are prerequisites to knowing what to reduce, where. I hope CALFED will include language in their RFP, or allow for a broad interpretation, that will facilitate funding of our proposals.	Bruce Thompson, *San Francisco Estuary Institute*	4/17/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: In general, reduction in the Water Quality Program Plan means a decrease in the level (concentration/loading) of a parameter of concern.

D—035232

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Process	The need for prompt best information should not be undercut. The short term approach of broadly supported, quick actions have good potential with little harm and should be undertaken quickly in conjunction with a long-term scientifically rigorous approach to problem identification. It is inappropriate to defer action on significant problems even if poorly understood. I support the use of independent experts, an autonomous administrative structure, adaptive management, discipline in application to scientific research, and high public accountability and visibility. An important question is whether the short term approach and the scientifically rigorous approach are being appropriate blended together in the CALFED Water Quality Program.	Pete Rhoads, *Metropolitan Water District*	4/15/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: The Water Quality Program is currently in Phase II. The long term strategy for implementation of the program will be developed in Phase III and described in the Water Quality Implementation Plan.
Process	I feel any comments on individual action items in the Draft Analytical Plan must wait until the revisions have been made and accepted by the Group.	Jeanette Thomas, *Stockton East Water District*	11/26/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Comment noted.
Process	Source Control By Watershed Management. Identification of projects which will or will not need CALFED financial support will probably not be possible.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Comment noted.
Process	Financial Incentives for Integrated Pest Management for Agriculture. In general, the District believes that the efforts proposed by the CALFED plan should be qualified appropriately based on known limitations regarding data and simplifying assumptions which will have to be made.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Data limitations are widely recognized by the Program. The CMARP is being developed to address the short and long term data needs of CALFED.

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Data Limitations	Pesticide Reduction by Land Fallowing. Due to data and information limitations, it is doubtful whether a prioritized list of land to be retired can be developed which will withstand critical review, especially where the findings are contentious. This seems to be overstepping the capability of current knowledge.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: In accordance with CALFED policy, land retirement has been removed from the document.
Data Limitations	Reduce Urban Pollutant Loadings by Source Control. Again, the summary and analysis of stormwater discharge data and associated receiving water data for all communities in the Central Valley is a very large effort. It may be necessary to select several programs with the best data, prepare estimates for those areas, and extrapolate the results through the valley.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	
Data Limitations	Reduce Urban Pollutant Loadings by Source Control. Information on the effectiveness of stormwater BMP's is lacking. Progressive programs are just now developing this information, in pieces.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: The Water Quality Program will use the best data available.
Data Limitations	Reduce Urban Pollutant Loadings by Source Control. The prioritization of stormwater source control measures will be compromised by data limitations.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: The program recognizes the presence of significant data limitations; however, efforts will be made to use the best available data and best professional judgment.
Data Limitations	Source Control By Watershed Management. Many watershed management programs are now in the developmental stage. Hard information from these programs regarding water quality and ecological resources will be rare. Information on control measures and effectiveness has typically not been developed yet.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Watershed coordination has been undertaken as a separate activity of the Water Quality Program.

D-035234

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Data Limitations	Undertake Toxicity Bioassay and Identification Testing. Little data using sound QA/QC procedures exist, and most of that will have been obtained in the past few years. Consequently, the significant data gaps will likely be very large.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: CALFED will use the best available information to address toxicity of unknown origin.
Data Limitations	Undertake Toxicity Bioassay and Identification Testing. Great care will have to be taken in identifying appropriate methods for assessing toxicity in water, and especially in sediment.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Toxicity testing and TIE's are included as performance measures in many actions of the Water Quality Program Plan. Specific tools for assessing action effectiveness will be identified as part of the Water Quality Implementation Plan.
Data Limitations	The data regarding mine drainage remediation, which is essential to the evaluation of control measures, is very limited. Results from this analysis will be very approximate and may not be adequate for prioritization of control measures.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: The Program recognizes the existence of significant data limitations and will use the best data available in its analyses. A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Data Limitations	Data limitations regarding mine drainage limitations will also hamper water quality modeling efforts. What models are proposed for use in this effort? Are they suitable for prediction of downstream changes in levels of trace metals?	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Water quality models are beinge evaluated for their applicability. A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.
Action Description	Surface Drainage Source Control Agricultural Drainage. The introduction to this section suggests implementing Integrated Pest Management (IPM) "especially for parameters of concern." In fact, the three currently used pesticides listed as parameters of concern are often employed as IPM tools for pest control. A more accurate statement of the project objective would be to implement BMPs within an IPM strategy to mitigate concerns related to pesticide use, off-site transport and aquatic toxicity. These BMPs should not be focused on Parameters of Concern, rather they should target agronomic practices which lead to aquatic toxicity endpoint of concerns.	Bryan L. Stuart, Ph.D. *DowElanco*	1/10/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: In response to stakeholder comments, Integrated Pest Management has been removed from the Water Quality Program Plan.
Action Description	This section suggests that the project "should result in reduced pesticide loads applied to land." This would be true if implementation of an improved IPM approach eliminated unnecessary pesticide use (an outcome we would welcome). However, in some cases, the opposite may be true. In a highly targeted necessary application, a greater percentage of that application remains on the field rather than being lost by off-site transport into the aquatic environment.	Bryan L. Stuart, Ph.D. *DowElanco*	1/10/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: In response to stakeholder comments, Integrated Pest Management has been removed from the Water Quality Program Plan.

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Action Descriptions	Many of the action items need to be re-written in order to better define intent. It appears that several of the items could be consolidated into a single action item of a common concern. For example, action items 1 through 16 are all related to the agricultural drainage problem on the west side of the San Joaquin Valley.	Walter Ward, *Modesto Irrigation District*	11/26/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Actions have been grouped into categories by source and location for the Water Quality Program Plan.
Action Prioritization	During the 11/20 meeting concerns arose while the agricultural water quality sub-team was ranking the action items. The ag group did suggest some revisions.	Jeanette Thomas, Stockton East Water District	11/26/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: A mechanism for prioritizing actions will be identified in the Water Quality Program Plan.
Action Prioritization	Source Control By Watershed Management. Prioritization of watershed management projects will be very subjective.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Watershed coordination has been undertaken as a separate activity of the Water Quality Program.
Action Prioritization	Action item rankings can vary significantly by region. The listing should be restructured regionally as Sacramento Valley, in-Delta, east bay, north bay, south bay, San Joaquin Valley east side, and export area, in many instances	David Orth, *Westlands Water District*	12/6/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Actions have been grouped according to source and geographic location.
Action Prioritization	Prioritization as low, moderate, or high can be affected by the time frame in which an action is contemplated. The District recommends the list be restructured and recirculated with three prioritization time frames: 1-2 years, 3-5 years, 5-10 years, and 10-24 (year 2020) years.	David Orth, *Westlands Water District*	12/6/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: A mechanism for prioritizing actions will be developed as part of the Water Quality Implementation Plan.

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Action Prioritization	The action list and prioritization does not explicitly address technical or financial feasibility or probability of success. These factors should be included in a reassessment of the list. The District suggests that technical feasibility and probability of success be ranked numerically, say 1-5, and financial feasibility include some degree of cost analysis leading to a unit cost for the action to enable comparison and feasibility assessment.	David Orth, *Westlands Water District*	12/6/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: A mechanism for prioritizing actions will be developed as part of the Water Quality Implementation Plan.
Cadmium, Copper and Zinc	The proposed Water Quality Subject Area #4 targets copper, zinc, and cadmium loads to the Sacramento River above Hamilton City from abandoned and inactive mines. The Water Quality Program, however, recommends rejecting proposals that would achieve corrective actions required of responsible parties as a result of regulatory or legal activities. At least 97% of the copper, cadmium, and zinc load to the Sacramento River watershed upstream of Hamilton City drains from inactive mine sites subject to regulatory or legal requirements, thus, disqualifying inactive mine remediation project proposals on the basis of the proposed criteria will prevent CALFED from achieving water quality objectives for cadmium, copper, and zinc. CALFED should reconsider applying the proposed criteria. Instead CALFED could require that responsible parties share the cost of mine remediation.	Linda Mercurio, *Mining Remedial Recovery Company*	4/2/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Comment noted. Inactive and abandoned mine site are eligible under water quality actions as mine remediation proposals. CALFED does not get involved in projects that are legally or regulatory-driven. Those projects are the responsibility of the dischargers. However, CALFED may get involved above and beyond what is regulatory -driven if it can enhance those projects cumulatively or regionally, and if those projects have a demonstrated benefit to the Bay-Delta.
Chlorpyrifos, Diazinon	Several folks suggested that holding agricultural drain waters and urban runoff would allow chlorpyrifos, diazinon, and other pesticides to degrade. While this is certainly true, I question whether it would necessarily reduce toxicity because the degradation byproducts themselves are often toxic. I suggest that toxicity of transformation of byproducts be added as an issue of concern for these actions.	Phyllis Fox	9/20/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Chlorpyrifos, Carbofuran and Diazinon	Under Priority Water Quality Subject Areas, Item 2 reads: "Reduction of the pesticides Chlorpyrifos, Carbofuran and Diazinon in the Sacramento and San Joaquin Rivers and Delta from surface agricultural drainage and Delta Island drainage." We believe it is potentially counterproductive for a policy such as this to focus on specific chemicals. Carbofuran, chlorpyrifos, and diazinon are not the problem. The problem is not any specific chemical, it is an agronomic and chemical management problem. The Rice Pesticide Management Program, as run by the Department of Pesticide Regulation in close cooperation with the rice industry, demonstrates how wise and careful management of pesticides and cultural practices can have a substantial positive effect on water quality. This program has managed to reduce the chemical loading in the Sacramento River from rice pesticide use by over 98 percent. Banning or restricting the use of a particular chemical may have unintended consequences. Restricted dormant spray use of chlorpyrifos and diazinon may reduce water quality problems but it will cause an increase in use of pesticides during the growing season. One dormant spray could be replaced by two or three in-season cover sprays. We believe a generic approach would fit better with the concept of keeping the Delta ecosystem healthy by dealing with the root problem not the symptom. We suggest the following language to replace Item 2: Reduction of the impacts of pesticides in the Sacramento and San Joaquin Rivers from surface agricultural drainage and Delta island drainage. Item 3 reads: "Reduction of Diazinon and Chlorpyrifos, nutrients, salinity, dissolved oxygen, turbidity and metals in urban storm water runoff." For the same reasons as Item 2, we suggest the following language to replace Item 3: Reduction of the impacts of pesticides, nutrients, salinity, dissolved oxygen, turbidity, and metals in urban storm water runoff.	Stephen D. Murrill, *S.D. Murrill & Co.*	4/9/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: At the December 3, 1997, Parameter Assessment Team meeting, the PAT decided that carbofuran, chlorpyrifos, and diazinon should remain on the parameter of concern list.

D—035239

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Water Treatment	To meet federal and state drinking water standards, treatment options such as GAC reverse osmosis, and micro filtration should be pursued and given priority for funding. These options, while expensive, may be less costly and provide greater assurances of long-term protection than do isolated facilities in the Delta.	Marguerite Young *Clean Water Action*	7/16/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: These treatment options have been identified in the actions. Specific implementation measures will be further refined as part of the Water Quality Implementation Plan.
Land Fallowing	The San Joaquin River Group will not support mandatory land fallowing. The Group believes that although efficient water management practices are an integral component of management of the San Joaquin River water supply, mandatory conservation measures that ignore local conditions and constraints will not further CALFED's objectives, but rather could harm them.	Allen Short, Chairman, *San Joaquin River Group*	1/28/97	1/8/98: Hard copy and electronic copy of draft fax cover sheet provided to Judy Heath. *Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Follow-up action needed. Discuss how to respond with Terry Mills. 12/15/97: Draft fax to Terry Mills was forwarded to Judy Heath for review and approval.
Mercury	Regarding the Priority Water Quality Subject Areas, Item 7, the reduction of mercury should be given high priority among water quality issues in light of bioaccumulation. Recent public warnings for consumption underscore the serious nature of mercury bioaccumulation.	Jerry Troyan, *Sacramento Regional County Sanitation District*	4/4/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: A mechanism for prioritizing actions will be developed as part of the Water Quality Implementation Plan.

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Mercury Reduction	This issue must be addressed under conditions of limited financial resources that can be devoted to mercury reduction is the reduction of mercury that leads to methyl mercury formation within the Delta and Bay that leads to excessive bioaccumulation in fish and other aquatic life within these waterbodies. For CALFED to start throwing money at mercury input reduction without regard to the aquatic chemistry fo mercury si technically invalid and can be highly wasteful of public funds. There is need for CALFED to establish a mercury advisory committee which would assist CALFED in developing technically valid approaches for defining the magnitude of the current mercury problem within the Delta, the sources of mercury that are causing real problems and in formulating technically valid, cost effective programs for controlling mercury from these sources.	G. Fred Lee, *G. Fred Lee & Associates*	4/17/97	
Mine Drainage Remediation	Mine Drainage Remediation--The description for this action implies that such remediation will be largely financed through pollutant trading, funded primarily by publicly owned treatment works (POTW). Such trading agreements are complex and have little or no track record. While trading may work in some instances, its role should be significantly de-emphasized in this document.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Pollutant-trading has been removed.
Mine Drainage Remediation	Despite the mention of pollutant trading in the description, the study steps do not refer to trading as a financing option. The District believes this position to be wise, and prefers that pollutant trading also be eliminated from the description.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Pollutant trading has been removed.

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Mine Drainage Remediation	CALFED has jumped the gun with regard to formulating a reduction program for copper, zinc and cadmium associated with abandoned or inactive mines. While there is no question that acid mine drainage in some parts of the Delta tributary causes toxicity to aquatic life in a Delta tributary there are significant questions about the water quality - ecological significance of the limited areas in Delta tributaries where the metals are in a form that is toxic to aquatic life. Two things have to be done before large amounts of CALFED's money should be spent controlling acid mine drainage problems. It either has to be shown that the heavy metals which exceed USEPA water quality criteria in Delta tributaries and within the Delta are toxic, available forms and that the toxicity associated with them is significantly adverse to Delta aquatic life resources or it must be shown that the toxicity found in the tributaries due to acid mine drainage problems is of major significance to Delta aquatic life resources. There is no question that there are adverse impacts near where the acid mine drainage enters the tributary waters. However, from a CALFED perspective, does this apparently limited sphere of influence adversely impact Delta resources? This issue must be reliably resolved since the acid mine drainage problems could consume massive amounts of CALFED money and have little or no impact on "fixing" the Delta water quality problems.	G. Fred Lee, *G. Fred Lee & Associates*	4/17/97	
Pesticide Reduction by Land Fallowing	This action also includes mineral salts and microbial agents.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Pesticide Reduction by Land Fallowing	Agricultural interests at the 11/20 meeting raised significant concerns regarding the description of this action. In addition, agricultural groups have raised these and similar concerns at public meetings during Phase I of the CALFED Program, as well as at the Bay-Delta Advisory Council meetings. Appropriate responses and modifications should be made to address those concerns.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Comment noted. In accordance with CALFED policy, land retirement and land fallowing have been removed from the document.
Pesticide Reduction by Land Fallowing	Data on water quality, particularly for pesticides, in rivers and drainage waters is limited.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: CALFED will develop its programs based upon the best data available.
Pesticide Reduction by Land Fallowing	Once severe drainage problems have been defined, is available information adequate to identify such problems throughout the Central Valley?	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: CALFED will develop its programs based pon the best data available.
Pesticide Reduction by Land Fallowing	Study Step 5 refers to an assessment of toxic element and organic carbon reductions as a result of land fallowing. This appears to be an expansion of the scope of this item, which is aimed at pesticides, salts, and pathogens.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Comment noted. In accordance with CALFED policy, land retirement and land fallowing have been removed from the document.

D-035243

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Pesticide Reduction by Source Control	The action description and several of the Study Steps refer to reductions in salts and microbial agents, while the title refers only to pesticides.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Action statements have been updated to reflect the parameters of concern addressed by each action in the Water Quality Program Plan.
Pesticide Reduction by Source Control	The scope of this study effort is enormous, given the magnitude and diversity of the agricultural practices, crop types, soil types, pesticide uses, and water management practices in the Central Valley. Is there enough existing information to undertake these steps?	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: The program will use the best data available appropriate to a programmatic level of analysis.
Pesticide Reduction by Source Control	Data limitations will again significantly limit the ability to evaluate various control measures. The results of this effort will be highly approximate.	Jerry Troyan, *Sacramento Regional County Sanitation District*	11/27/96	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: The program will use the best data available appropriate to a programmatic level of analysis.
Urban and Industrial Runoff	I provided comments to CALFED in early January regarding the Urban and Industrial Stormwater Section of the December 1996 Water Quality Task Group meeting minutes. I provided you with a detailed discussion of the many of these issues as they should be addressed by CALFED. In February 1997 I obtained a revision of the Urban and Industrial Stormwater Runoff Program description and found that is still contained significant technical problems in the proposed approach for managing so-called water quality impacts. The basic fundamental issues were improperly addressed.	G. Fred Lee, *G. Fred Lee & Associates*	5/8/97	

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Urban and Industrial Runoff	I have provided CALFED management with a number of comments about stormwater runoff water quality impact evaluation and management in connection with CALFED's proposed urban area and industrial stormwater runoff water quality control program. After intensive study, typical urban area and highway stormwater runoff has not been found to be significantly adverse to the beneficial uses of the receiving waters for the runoff. This arises from several factors, the most important of which is the chemical forms of the constituents in runoff as well as the short duration of exposure that aquatic organisms can receive associated with the runoff event.	G. Fred Lee, *G. Fred Lee & Associates*	5/8/97	
Urban and Industrial Runoff	I have enclosed several paper and presentations concerning urban stormwater runoff water quality management issues to provide additional information on issues I have previously raised regarding the inappropriate approaches that the urban and industrial stormwater advisory group has developed as proposed CALFED management programs. I recently drew your attention to poster items from a paper devoted to regulating chromium. This paper discussed the potential significance of chromium VI as a pollutant in urban area and highway stormwater runoff. From the information available, it can be concluded that chromium VI is under-regulated in urban area and highway stormwater runoff and could be a significant source of aquatic life toxicity in receiving waters for such runoff. The USEPA has not reviewed the literature on chromium VI toxicity to zooplankton since the early 1980s, with the result that the USEPA water quality criterion is badly out-of-date compared to what is known on the toxicity of chromium VI. While the USEPA criterion is now 10 μg/L, chromium VI is toxic to several important forms of zooplankton at 0.5 μg/L. Note, chromium VI will not be removed by the detention basins that the CALFED urban area and industrial stormwater runoff advisory panel recommended. [Enclosures in main file].	G. Fred Lee, *G. Fred Lee & Associates*	7/1/97	

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Urban and Industrial Runoff	Enclosed are slides regarding copper. The information discusses the potential significance of copper in urban area and highway stormwater runoff as a water pollutant. The slides provide a good overview of key issues that need to be considered in evaluating the significance of copper as a stormwater runoff-associated constituent. In general, urban area street and highway runoff associated copper is being significantly overregulate. There were some discussions at the California Storm Water Task Force meeting this past spring on the need to control lead in urban stormwater runoff because the exceedance of the lead water quality criterion in the runoff waters. Lead, like copper, is being significantly overregulate with respect to water quality and soil quality. DTSC is in the process of significantly raising the allowed concentrations of lead in soils that are considered "safe" for child and adult contact. [Enclosures in binder].	G. Fred Lee, *G. Fred Lee & Associates*	7/1/97	
Urban and Industrial Runoff	Enclosed is a set of slides that summarize the key issues that need to be addressed in evaluating the water quality significance of diazinon and chlorpyrifos caused toxicity in urban area stormwater runoff. The Urban Pesticide Committee is reviewing what is known about the potential water quality problems associated with diazinon and chlorpyrifos toxicity in urban streams. As discussed, finding toxicity in runoff waters does not means that this toxicity is the cause of the significant water quality problems in the receiving waters for the runoff.	G. Fred Lee, *G. Fred Lee & Associates*	7/1/97	

D-035246

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Urban and Industrial Runoff	While reviewing the subgroups write up there was some information which was not correct such as, "Chlorpyrifos should be removed from the list of parameters of concern associated with urban runoff because it is not used in urban area." This is not true since many household cleaners such as Ortho, etc., use this as main ingredients. Similar situations exist with respect to number of other organophosphorus pesticides such as diazinon, except that diazinon does not accumulate in sediments, but still cause aquatic life toxicity in storm water runoff from urban and agricultural areas.	*North Bay Contractors*	2/7/97	1/8/98: Forwarded hard copy and electronic copy of draft fax cover sheet to Judy Heath. *Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* CALFED RESPONSE: The Department of Pesticide Regulation was the source of the statement that Chlorpyrifos is not available for domestic use. We will verify this information with DPR. 12/10/97: Draft fax was forwarded to Judy Heath for review and approval.
Urban Stormwater Runoff	Regarding the Priority Water Quality Subject Areas, Item 3, achieving significant reductions will require public education programs as well as technical solutions and will not be easy. The District and a number of other public agencies are presently monitoring for several pesticides, metals and other constituents to understand better how to manage runoff quality. To date, nutrients, salinity and turbidity in urban runoff have not been considered as having beneficial uses of water. A cost benefit analysis should be performed on any alternatives developed for these parameters. Finally, "dissolved oxygen" is mentioned; should this have been "oxygen-demanding materials?"	Jerry Troyan, *Sacramento Regional County Sanitation District*	4/4/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: "Oxygen-demanding materials" will be incorporated where appropriate.
Watershed Coordination	Coordination of these activities is important. I have heard CALFED staff discuss how CALFED is going to be the master coordinator for these activities. In order for CALFED to assume this role, it must bring substantial dollars to the table to enable the various watershed groups to address many of the issues they cannot now address because of the limited funding. For CALFED to assume that it is going to impose a layer of bureaucracy on the existing watershed toxics control programs without providing these programs with substantial funding is, in my opinion, highly inappropriate.	G. Fred Lee, *G. Fred Lee & Associates*	4/17/97	

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Comments from Stakeholders
Water Quality Actions[1]

Topic	Comment	Person/ Organization	Date	Response
Watershed Coordination	Regarding the Priority Water Quality Subject Areas, Item 6, The District strongly supports the concept of coordination of watershed water quality activities related to toxic contaminant reduction and development of watershed-wide solution to water quality problems affecting the ecosystem. This is the same concept the District had in mind when it initiated the Sacramento River Toxic Pollutant Control Program.	Jerry Troyan *Sacramento Regional County Sanitation District*	4/4/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Watershed coordination activities have been undertaken as a separate activity of the Water Quality Program.
Source Control Watershed Management	Source water protection is the first and often most effective barrier to drinking water contamination. By protecting source waters, the need for expensive new treatment facilities and other infrastructure can be greatly reduced, thus lowering the burden on communities and taxpayers over the long run.	Marguerite Young, *Clean Water Action*	7/16/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Reduction of parameters of concern in source water is identified in many water quality actions in the Water Quality Program Plan.
Water Management	The water management actions do not appear to be related to the Water Quality Program and should be included in other elements of the CALFED program. The water quality impacts of these measures should then be assessed in the water quality impact analysis. In some cases, water management actions, including water conservation practices, can reduce or affect water quality for agricultural and environmental purposes. For example, reduced water supply in systems where the water is reused or recirculated throughout the service area can cause increased salinity levels that detrimentally affect crop and soil health. Reduced water can also affect the quality of wildlife habitat found in agricultural drains.	*Ag/Urban Water Caucuses Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: The water management actions, as all the water quality actions, are integrated with other elements of the CALFED Program. The water management actions are included within the Water Quality Program to address specific water quality problems associated with water management practices.

1. Comments on water quality actions may also be found in other sections of the Comment and Response Summary.

D-035248

WATER QUALITY PROJECTS

CALFED
BAY-DELTA
PROGRAM

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Comments from Stakeholders
Water Quality Projects

Topic	Comment	Person/ Organization	Date	Response
General	These projects should be accountable to an independent oversight board which has the latitude to initiate target studies as additional use impairments are identified. Where monitoring results demonstrate clearly designed potential problems, the oversight committee should have the responsibility to recommend a course of action to the appropriate authorities. A provision should be provided for the training and funding of volunteer monitoring efforts and educational programs. A properly formulated risk assessment process is necessary to prioritize projects that are technically valid and cost-effective.	Bill Jennings, Mike Lozeau, *Delta Keeper*	7/2/97	
General	Will we get another chance to submit projects?	Liz Howard	1/23/97	Rick's Response: Yes, the January 8 date was not a drop-dead date. Will need to make a decision on a deadline though for this year's funding analysis.
Projects	Consider funding pilot studies	Linda Mercurio, *Mining Remedial Recovery Company*	11/27/96	
Projects	3b - This study step is not clearly written.	Linda Mercurio, *Mining Remedial Recovery Company*	11/27/96	

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Comments from Stakeholders
Water Quality Projects

Topic	Comment	Person/ Organization	Date	Response
Project Criteria	The following criteria should be included: • Under *Common Program Objectives*, add the criterion "Capacity to achieve numeric program objectives" to emphasize the need for project proponents to quantify project benefits. • Under *Common Program Objectives*, add the criterion, "Ease of monitoring, quantifying, and interpreting results." • Under *Project Documentation,* add a new category "Regulatory Analysis/Support" and a new criterion "Does not satisfy mitigation or other regulatory requirements of project proponent." This criterion is intended to ensure that CALFED funds are not diverted to projects that individual parties are required to undertake to their regulatory responsibility. • CALFED should require that project proponents provide or acquire some minimum level or percent of matching funds.	Byron Buck, *California Urban Water Agencies*	3/2/97	
Project Criteria	How will you develop criteria for projects - by whether it complies with CALFED objectives?	Liz Howard	1/23/97	Rick's Response: We are just beginning to develop that criteria. We will be soliciting stakeholder input.
Project Criteria	When you decide on criteria it might be helpful to tell stakeholders so that they can consider them when they are developing their projects. Isn't development of criteria a bit early when we really haven't established whether a problem exists?	Liz Howard	1/23/97	Rick's Response: We need to develop something tangible - certainty of benefit must be one of the criteria.

D—035251

DRAFT
Comments from Stakeholders
Water Quality Projects

Topic	Comment	Person/ Organization	Date	Response
Project Criteria	CALFED should immediately take steps to fund and implement projects which include: (1) A Delta monitoring program which regularly collects and analyzes constituents in the sediments and water column at a number of pre-selected sites. Sufficient provision must be made for bioassays on local and surrogate species and Toxicity Identification Evaluations on samples exhibiting toxicity. The program must be iterative and of sufficient duration to provide for long-term trend analysis and be flexible enough to permit follow-up on routine and episodic sampling results. It must provide for the long-term evaluation of the impacts and effectiveness of remediation approaches. Monitoring should be designed to provide data that can be integrated with data from tributaries and the Bay so that a landscape-level evaluation of environmental quality can be performed; (2) Special studies during periods of high intensity runoff, extensive pesticide application and anadromous fish spawning and early recruitment to develop a better understanding of the transport, fate and effects of contaminants; (3) Fish tissue studies and human health risk assessments to develop scientifically defensible, site specific human health advisories. Data should be collected on local species commonly consumed by local populations. Since available information indicates that local consumption rates likely exceed the national average, a special effort should be made to determine actual consumption rates by subsistence fishermen; (4) A bioassessment component to better define the effects of non-chemical discharges (e.g., sedimentation and habitat degradation); (5) A publicly accessible, central data collection point that assembles maps and publishes historic and current monitoring data in a usable and easily understood format.	Bill Jennings, Mike Lozeau, *Delta Keeper*	7/2/97	
Project Criteria	Potential funding sources for projects are not always clear-cut, thus, CALFED should have a strict criterion precluding projects which may receive additional funding from other sources	Joseph McGahan, *Summers Engineering Inc.*	4/4/97	12/9/97: Comment noted. CALFED promotes cost-sharing opportunities. The CALFED process and project funding criterion will be specified in RFP's.

D-035252

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Comments from Stakeholders
Water Quality Projects

Topic	Comment	Person/ Organization	Date	Response
Project Criteria	One of the criteria for selection identified by CALFED is the benefit/cost ratio. It should be noted, however, that not all projects result in easily quantifiable benefits (e.g. the real-time monitoring program proposed by the San Luis and Delta-Mendota Water Authority); thus, CALFED should also consider the use of additional appropriate measures for evaluating project benefits.	Joseph McGahan, *Summer Engineering, Inc.*	4/4/97	12/9/97: Comment noted. We agree that benefit/cost is on of the criteria. However, several factors are considered, for example: exceedance of criteria, adherence with solution principles, and adherence with program goals and objectives.
Project Criteria	The District supports adding Water Quality Specific Selection Criteria because physical habitat characteristics by themselves will not protect the biological resources in the Delta if water quality is not adequate. Under the heading Water Quality-Specific Selection Criteria, fourth bulleted item, the word "numeric" should be eliminated. It is too restrictive in light of narrative regulatory criteria used by the Regional Water Quality Control Boards. Criteria for toxicity are a prime example of this situation.	Jerry Troyan, *Sacramento Regional County Sanitation District*	4/4/97	12/9/97: Comment noted. Numeric or narrative standards are used where appropriate.
Project Criteria	The North Bay Aqueduct Contractors (Contractors) suggest the following criteria for evaluating projects: • "Expected degree of water quality improvement" - projects that will significantly improve water quality should be given a higher priority than those with lesser impact. • "Availability of additional funds" - CALFED funds should not be diverted to projects (e.g., Category III Funds or other or the State Water Resources Control Board's Proposition 204 Agricultural Drainage Management Program). • "Regulatory Compliance" - CALFED funds should not be used for project which must be undertaken by project proponents because of regulatory requirements. In addition, the Contractors urge that water quality assessment studies also be funded by CALFED.	David Okita, General Manager, *Solano County Water Agency*	3/6/97	

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Comments from Stakeholders
Water Quality Projects

Topic	Comment	Person/ Organization	Date	Response
Project Prioritization	We are concerned that CALFED is on the threshold of approving projects to improve Delta water quality conditions without first prioritizing them according to sound scientific criteria. Such an approach risks wasting scarce public funds for projects that may have limited effectiveness in addressing real issues of beneficial use impairment in the Delta. Aquatic life toxicity in the Delta and its tributaries is one of the most important water quality problems. While attention has been focused on habitat destruction and excessive pumping of Delta water for export as the principal causes of fisheries decline, it is highly likely that aquatic life toxicity also plays a major role in affecting the health of the Delta ecosystem for a number of key species. Too little effort is being made today to address the issue of aquatic life toxicity in the Delta and its tributaries.	Bill Jennings, Mike Lozeau, *Delta Keeper*	7/2/97	
Project Selection	You have suggested that proposals cannot be for implementing projects for which other funding sources are available. This is commendable in that it makes an effort to avoid wasting CalFed money. However, you should consider the possibility that money that is available elsewhere may not be granted to the project at issue. If the project is worthy, it should be given serious consideration. Maybe the policy should promote a negotiation with the other funding source to develop a partnership or cost sharing approach.	Stephen D. Murrill, *S.D. Murrill & Co.*	4/9/97	12/9/97: Comment noted.
Project Selection	The North Bay Aqueduct Contractors (Contractors) support CALFED's inclusion of the relocation of the North Bay Aqueduct Intake to improve drinking water quality for the Contractors as a medium priority project. However, the proposed relocation may be better characterized as providing a second intake to provide operational flexibility. Further, there may be other management methods that could improve water quality for the Contractors that would require relocation of the intake; thus, the Contractors assume that the "intake relocation" is a placeholder for general measures to improve water quality in the North Bay Aqueduct.	David Okita, *Solano County Water Agency*	2/3/97	

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Comments from Stakeholders
Water Quality Projects

Topic	Comment	Person/ Organization	Date	Response
Project Selection	In order to gain stakeholder confidence, CALFED must establish a process for the evaluation, prioritization, and selection of projects that is explicitly justifiable, and consistent. The California Urban Water Agencies suggest that CALFED staff: • Reformat the selection criteria into three groupings: 1) *CALFED Objectives,* 2) *Common Program Objectives,* and 3) *Project Documentation* [Note: Additional detail was provided by CUWA in the form of an outline providing specific criteria under each of the groupings]. • Establish consistent, numeric ranking scales for each criterion. • Clearly define each criterion and the ranking process used to evaluate each project	Byron Buck, *California Urban Water Agencies*	3/2/97	
Project Selection	Consider expanding the review process to include additional mine remediation projects. MRRC owns several inactive copper and zinc mines in the West Shasta Mining District.	Linda Mercurio, *Mining Remedial Recovery Company*	11/27/96	
Project Selection	The District urges CALFED to give high priority to programs that would reduce pollutant loads from agricultural drainage and wastewater discharges. This includes implementation of best management practices on pesticide applications such as the Integrated Pest Management (Action 11, 32B) to reduce the use of pesticide within the Sacramento-San Joaquin River watershed. Other drainage programs such as reconstructing subsurface drainage systems (Action 11) and improved land use management should also be accorded high priority. These projects need to be coordinated with efforts by EPA to set up source water protection assessment guidelines as part of the Safe Drinking Water Act Amendment of 1996.	Richard Denton, *Contra Costa Water District*	1/10/97	

D—035255

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Comments from Stakeholders
Water Quality Projects

Topic	Comment	Person/ Organization	Date	Response
Project Selection	The District also supports the pilot projects proposed by DWR's MWQI Program to explore different approaches to treat agricultural drainage on-site and to use real-time monitoring of Delta water quality to coordinate agricultural drainage discharges. Toxicity monitoring, including bioassays, should also be included in this monitoring program.	Richard Denton, *Contra Costa Water District*	1/10/97	
Project Selection	The emphasis should be on funding projects that take positive steps towards actually reducing contaminant loadings and improving water quality. Basic research studies (except for pilot studies) should be given lower priority.	Richard Denton, *Contra Costa Water District*	1/10/97	
Project Selection	Some proposed projects need to be reviewed to see if they create other environmental problems. For example, No. 5 in the category "Surface Drainage Source Control" of "High Priority Projects" in your December 18, 1996 memo proposes to store agricultural drainage in open surface reservoirs. This could be an attractive nuisance and expose wildlife, particularly waterfowl, to high concentration of selenium.	Richard Denton, *Contra Costa Water District*	1/10/97	

WATER QUALITY DOCUMENTS

CALFED
BAY-DELTA
PROGRAM

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Comments from Stakeholders
CMARP

Topic	Comment	Person/ Organization	Date	Response
General	We believe that a comprehensive monitoring, assessment, and research program, designed to address real water quality problems, is an essential component of the Water Quality Program. Despite years of study, many water quality problems are not yet properly understood and the relationship between in-stream biological effects and water quality standards exceedances or toxicity test results using standard bioassay is poorly understood, at best. It may not be cost effective to take action prior to understanding the water quality problems of the Delta and its watershed; however, CALFED needs to find the proper balance between monitoring and taking action. There is sufficient justification to proceed with control measures for some Water Quality Program actions (e.g., mine abatement, control of dormant spray pesticides); however, many of the Water Quality Program actions need to be monitored and adjusted based on monitoring program results (e.g., unknown toxicity, biological effects of selenium). For adaptive management to be successful, clear objectives and measurable criteria for assessing the effectiveness of actions need to be identified. We offer these preliminary ideas that should be included in the assessment and monitoring program: • Comprehensive toxicity testing of the Sacramento and San Joaquin Rivers and the Delta • TIE's to determine the chemicals responsible for toxicity when it is found • Effects of selenium and selenium tissue levels on aquatic organism • Loading analysis for salinity, TOC, bromide, and pathogens so that sources can be identified and control measures recommended	Dan Nelson, Byron Buck, *Ag/Urban Water Caucuses Policy Group*	7/11/97	

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Comments from Stakeholders
CMARP

Topic	Comment	Person/ Organization	Date	Response
General	The District strongly endorses the proposal to establish a Comprehensive Water Quality Monitoring and Assessment Program as described. The District has initiated such programs with the Coordinated Monitoring Program in the Sacramento metropolitan area in 1992, and by getting funding from Congress to begin the Sacramento River Toxic Pollutant Control Program in 1995. This monitoring program will include biological assessment work by the California Department of Fish and Game, Department of Water Resources, and the U.S. Geological Survey, as well as ambient toxicity work supported by the Central Valley Regional Water Quality Control Board, U.C. Davis, and the California Department of Pesticide Regulation	Jerry Troyan, *Sacramento Regional County Sanitation District*	4/4/97	12/9/97: Comment noted.
General	I concur with Luoma's and Spies' assessment of the CALFED request for input on the upcoming call for assistance on water quality. CALFED should carefully consider their comments. There needs to be some overall framework for integrating water quality monitoring, special studies, and remediation programs into the EERP. Such "systems" are most effective when part of a well conceived, adaptive program. CALFED might use this upcoming funding opportunity to move towards Luoma and Spies' suggestions. Why not use this funding opportunity to create the framework? Specifically, could the word "actions" in the first question be interpreted in a very broad sense. Could an action be planning study to set the needed framework, or special studies on some obvious, critical aspect of the issue that would probably need to be done even when a framework was completed?	Bruce Thompson, *San Francisco Estuary Institute*	4/17/97	
General	We support the need for the Comprehensive Monitoring, Assessment, and Research Program. We urge you to include monitoring for parameters of concern to drinking water agencies. The NBA pumping plant, Lindsey Slough, and the Yolo Bypass should be included in the monitoring program.	David B. Okita, *Solano County Water Agency*	7/11/97	

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Comments from Stakeholders
CMARP

Topic	Comment	Person/ Organization	Date	Response
General	Currently, there is no water quality monitoring programs in the Delta comparable to the SFEI's Regional Monitoring Program in the San Francisco Bay. Given the limited data available on the chemical constituents and pathogenic organisms in the Delta, and poor information on real impacts to identified beneficial uses, creation of a comprehensive monitoring project is a crucial first step to the success of any Delta restoration effort.	Bill Jennings, Mike Lozeau, *Delta Keeper*	7/2/97	
General	We strongly believe that a comprehensive monitoring program is fundamental to the success of CALFED efforts and the focus of that program should be directed toward identifying and evaluating actual water quality beneficial-use impairments, then documenting the improvements achieved. These impairments are inadequately addressed in draft CALFED program and include, among others: aquatic toxicity, dissolved oxygen depletion, reduced quality of domestic water supplies, excessive eutrophication, chemical bioaccumulation, pathogenic impairment of contact recreation and sediment impairment (i.e., excessive accumulation, oil and grease, litter and toxicity).	Bill Jennings, Mike Lozeau, *Delta Keeper*	7/2/97	
Selenium	A study of the biological effects of selenium should be included in the comprehensive monitoring, assessment and research program.	Dan Nelson, Byron Buck, *Ag/Urban Water Caucuses Policy Group*	7/11/97	

DRAFT
Comments from Stakeholders
CMARP

Topic	Comment	Person/ Organization	Date	Response
Studies	CALFED should initiate a pilot study to investigate the formation of bromate and other disinfection by-products at low bromide concentration. The study should aim to obtain a better understanding of the relationship between bromate and bromide concentration.	*North Bay Contractors*	2/7/97	CALFED RESPONSE: Because funding now appears to be unavailable for performance of any work other than ecosystem restoration activities, and because a study of this nature would have no direct ecosystem benefits, it is unclear how such a project could be sponsored by CALFED anytime soon. The problem is that the results of the study would be needed in the selection of a Preferred Alternative in the Programmatic stage of the process. Urban stakeholders are unlikely to be pleased to learn projects serving their interests are not implementable at this juncture of the CALFED process.
Studies	There needs to be a monitoring program to monitor runoff from a number of cities that contribute to Delta tributaries.	*North Bay Contractors*	2/7/97	CALFED RESPONSE: There already are programs to monitor storm water runoff from cities in the Delta watersheds. Over the course of program development we will be collecting and evaluating available data, and identifying any information gaps, though this will
Draft Framework of CMARP	I am happy CALFED is beginning to address the issue of properly evaluating the impact of implementing various CALFED programs on Delta water quality and aquatic resources. It is extremely important that the CALFED WQTG focus on assessing impacts of actions on water quality characteristics of concern to people. CMARP must, if it is to be a reliable program, focus on aquatic organism issues and not chemicals unless it is well established that measuring a chemical concentration is directly translatable to an organism population impact.	G. Fred Lee, *G. Fred Lee & Associates*	8/2/97	
Draft Framework of CMARP	Page 1, first bulleted item, mentions Phase I. Phase I should be defined.	G. Fred Lee, *G. Fred Lee & Associates*	8/2/97	

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Comments from Stakeholders
CMARP

Topic	Comment	Person/ Organization	Date	Response
Draft Framework of CMARP	Page 1, first bulleted item, states that the CMARP will be implemented through efforts of others, presumably those responsible for developing and implementing a particular action. This can lead to unreliable assessments since those who develop control programs will have a bested interest in "proving" their program is effective. The WQTG will need to establish a rigorous quality control of program effectiveness through independent assessment of programs.	G. Fred Lee, *G. Fred Lee & Associates*	8/2/97	
Draft Framework of CMARP	Page 1, second bulleted item, states that CMARP is to be devoted to "data evaluation and use." There are few individuals who work in some aspect of the water quality field who have the necessary expertise and experience to properly evaluate and use water quality data. The WQTG cannot rely on the various investigators/implmentors of proposed actions to properly evaluate and use the water quality data that will be generated from a CMARP activity. There will again be need for independent high quality peer review of CMARP proposed programs and the results of the control activities.	G. Fred Lee, *G. Fred Lee & Associates*	8/2/97	
Draft Framework of CMARP	Page 2, third bulleted item: It is important for CALFED not to fall into the trap of assuming that standardization of equipment, methods, etc., leads to comparable results over time or between locations at the same time. Standard methods tend to cause investigators to fail to properly evaluate the reliability of the analytical methods being used for the waters being examined.	G. Fred Lee, *G. Fred Lee & Associates*	8/2/97	
Draft Framework of CMARP	Page 2: Zero Base Framework should be defined.	G. Fred Lee, *G. Fred Lee & Associates*	8/2/97	

DRAFT
Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
General	The report does a good job of outlining the overall problems affecting water quality.	Dennis Kelly, *Novartis Crop Protection, Inc.*	10/3/97	
General	In our view, the Water Quality Program Component Draft report while acceptable as a first look falls far short of articulating the comprehensive vision for improving water quality in the delta and for beneficial uses of delta water throughout California. Improvement of water quality is one of CALFED's principal objectives, and deserves full treatment. The draft does not provide adequate context for the water quality problems or a statement of relative priority, contain numerous significant data gaps, provides an overly narrow range of action strategies, and needs clearer statement of how the program will be implemented, funded and assured.	Marguerite Young, *Clean Water Action*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.
General	We hope that future iterations of the Water Quality Program will reflect more breadth and depth of focus and look forward to working through the issues with you in the coming months.	Marguerite Young, *Clean Water Action*	10/28/97	12/10/97: Comment noted.
General	The Ag/Urban Policy Group has reviewed the Draft Water Quality Component Report. We understand that CALFED does not intend to revise and reissue the Water Quality Component Report but that information from this report will be incorporated into the draft reports on the existing conditions and impact analysis. We are offering comments so that they can be considered in development of future CALFED reports.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Beneficial Uses	There are gaps in the report with regard to significant water quality impacts and beneficial uses which have been overlooked and under evaluated. Water quality impairments to beneficial uses of the **San Francisco Bay**, associated with proposed CALFED programs in the Delta, aren't mentioned at all--a serious oversight.	Marguerite Young, *Clean Water Action*	10/28/97	12/10/97: The geographic focus of the Water Quality Program is associated with impairments to the Delta. Water quality within San Francisco Bay is included within the Water Quality Program inasmuch as it affects the Delta.

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Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Bromides	Dr. Orlob's analysis on San Joaquin River bromides concludes that bromides in the San Joaquin River drainage are predominantly (if not entirely) the result of the export of Delta water affected by sea water intrusion by the export pumps to San Joaquin Valley users. By implication, maintaining sufficient Delta outflow to limit sea water intrusion into the South Delta will, over time, solve the bromide problems for the export projects. The level of Delta outflow required to meet the western Delta water quality standards set forth in the current Bay Delta Plan is sufficient in most instances to limit bromide concentrations at the export pumps to acceptable levels.	Thomas M. Zuckerman, *Central Delta Water Agency*	9/25/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 24, 1997: While essentially true, one point of consideration is future drinking water regulations. Research casts doubt on whether current levels of bromides will be limited by regulations.
Bromides	With regard to bromides in the Delta water supply, I assume you have seen the analysis on San Joaquin River bromides prepared by Dr. Orlob for the South Delta Water Agency. If not, I would be happy to send you a copy. Dr. Orlob concludes that bromides in the San Joaquin River drainage are predominantly (if not entirely) the result of the export of Delta water affected by sea water intrusion by the export pumps to San Joaquin Valley users. By implication, maintaining sufficient Delta outflow to limit sea water intrusion into the South Delta will, over time, solve the bromide problems for the export projects. I believe the level of Delta outflow required to meet the western Delta water quality standards set forth in the current Bay Delta Plan is sufficient in most instances to limit bromide concentrations at the export pumps to acceptable levels. I note from the information you provided me from the Progress Report on Delta Simulation Model Studies of CALFED Alternative 1A, 1C, 2B, 2D, 2E and 3E that there are opportunities to control bromide concentrations at Clifton Court and Tracy PP without redirecting the impacts of bromide and TDS increases to Delta diverters and without the use of isolated transfer facilities (Alternative 3E). Avoiding redirected impacts is, of course, a major solution principle of CALFED.	Thomas M. Zuckerman, *Central Delta Water Agency*	9/25/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/11/97: Follow-up response forwarded to Mr. Zuckerman indicating that we had not received references that were previously requested of him regarding his August 13, 1997 comment regarding average DOC levels found in drinking water supplies in the U.S. Mr. Zuckerman provided his response on September 25, 1997. 12/10/97: On December 3, 1997, a meeting was held between the drinking water industry, USEPA and CALFED to identify source water quality targets for bromide and TOC. As a result of the discussion, urban water agencies are going to further analyze different levels of a constituent and report their findings to CALFED.

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Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Disinfection of Drinking Water Supplies	We would like to see a detailed calculation of costs for various methods of disinfecting drinking water supplies. It was stated that ozonation and filtration are too expensive and I would like to see the calculations this statement is based on. Many groups around the world do research on improved ozonation techniques and the bromate problem has probably been addressed and could be solved by optimizing the reaction processes. Since the disinfection process is the one single problem causing step (formation of trihalomethanes), it would be worth it to take a good look at alternative methods. I'd like to see a detailed cost calculation where the construction of a peripheral canal is weighed against introducing alternative disinfection methods.	Inge Werner, *UC Davis*	8/15/97	Rick's Response - 8/18/97: I don't recall that it was said in our August 6 meeting that ozonation and filtration are too expensive. John Gaston, a consultant with CH2M Hill, who is working for CALFED, provided an off the cuff cost figure, but I thought I recalled that he was talking about installation of Granular Activated Carbon facilities. Anyway, your point is well taken. All of the municipal utilities taking water from the Delta already employ filtration, as required by current regulations. Many, if not most of the larger utilities using Delta water are also in the process of moving to ozone. Therefore, it is certainly the case that these forms of treatment are not too expensive to be used. You are also quite right in suggesting that research on ozonation byproducts is ongoing, and that technological improvements can be anticipated. Over the last two years, the Journal of the American Water Works Association has been a particularly rich source of information on current treatment research activities. The USEPA and the AWWA Research foundation are providing direct support for a number of significant research activities that should help develop the needed technologies. Though promising research is ongoing, I believe it is still true as of today that the presence of bromide in drinking water supplies does present special treatment challenges, and that not all of the technological answers are in hand. The choice of a Delta alternative will not be based on a unidimensional analysis of cost of facilities versus cost of treatment. Indeed, there are many considerations involving ecosystem restoration and health, system integrity, and water quality. An environmentally superior alternative cannot be rejected on the basis of cost alone, and will not be so rejected within the CALFED process. Rather, the alternative that is chosen will

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Topic	Comment	Person/ Organization	Date	Response
Organic Carbon	I believe the terminology regarding organic carbon as a pollutant is inappropriate. Whereas organic carbon can become a constraint upon disinfection techniques (depending upon the process chosen), organic carbon is clearly a natural component in surface waters which have organic material in their watersheds. In the broad picture, organic carbon is a beneficial component of surface water supplies, serving as a basic component of primary productivity. It would be much more instructive and accurate to describe organic carbon as a "drinking water disinfectant constraint" rather than a "pollutant." The term "pollutant" has technical meaning in the clean water statutes which might dictate removal. In the case of organic carbon, this would engender more harm than good, especially given the opportunities for specific removal at reasonable cost by enhanced coagulation in the drinking water treatment process and/or by alternative disinfection techniques.	Thomas M. Zuckerman, *Central Delta Water Agency*	9/25/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 24, 1997: Comment noted. Many of the parameters of concern are natural constituents.

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Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Organic Carbon	Enclosed is a copy of Table III-7 which appeared at page 22 of M. Kavanuagh Testimony submitted as Exhibit DW-13 in the recently concluded evidentiary hearings on the Delta Wetlands Project before the State Water Resources Control Board. Data sources are identified in the footnotes. With regard to your comments about organic carbon as a "pollutant," I continue to believe the terminology is inappropriate. Whereas organic carbon can become a constraint upon disinfection techniques (depending upon the process chosen), organic carbon is clearly a natural component of surface water supplies, serving as a basic component of primary productivity. I believe it would be much more instructive and accurate to describe organic carbon as a "drinking water disinfectant constraint" rather than as a "pollutant." The term "pollutant" has technical meaning in the clean water statutes which might dictate removal, which, in the case of organic carbon, would engender more harm than good, especially given the opportunities for specific removal at reasonable cost by enhanced coagulation in the drinking water treatment process and/or by alternative disinfection techniques.	Thomas M. Zuckerman, *Central Delta Water Agency*	9/25/97	12/10/97: Organic carbon, like copper, selenium and nutrients is considered a parameter of concern to water quality because it is impairing one or more beneficial uses. Parameters of concern like these are a natural component of surface water supplies, however, at high enough concentrations they may impair beneficial uses.
Organics/ Pesticides	References to organics/pesticides seem to be overrated. The report does not differentiate between products which are no longer registered or used (i.e., DDT, toxaphene, chlordane) and other pesticides currently registered. It lumps the older chlorinated hydrocarbons, which have significant different environment effects and degradate properties, with the currently registered products. The inference being that all these products behave the same.	Dennis Kelly, *Novartis Crop Protection, Inc.*	10/3/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 24, 1997: A differentiation between no longer registered, strongly lipophilic pesticides and those currently registered pesticides which have shorter half-lives and less benign environmental behavior will be incorporated. Comment incorporated October 27, 1997, into the October 31, 1997, version of the Affected Environment document.

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Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Urban Stormwater Runoff	There is a vast arena of unregulated stormwater runoff that is a source of potentially significant water quality use impairment within the Delta and its tributaries. Runoff from ag lands, forests, and communities with less than 100,000 people are essentially unregulated with respect to being required to achieve water quality standards in ambient waters. CALFED's currently proposed approach of trying to use chemically-based target ranges as set forth in Table 3.4 is not only technically invalid for many of the constituents of concern, it is also not a legally defensible for both regulated and unregulated dischargers. The CALFED Water Quality Program should not be based on an exceedance of a numerical water quality standard, but must be based on finding a real water quality problem in CALFED waters, determining the cause of the problem and the source of the specific constituents responsible for the problem. This approach is legally defensible and readily implementable. It is one that CALFED can gain public support for.	G. Fred Lee, *G. Fred Lee & Associates*	8/18/97	
Executive Summary	Page E-1: There is a statement that the objective to provide good water quality for all beneficial uses will be achieved through development and implementation of the CALFED Water Quality Program. Although full implementation of the action strategies will likely result in improved water quality conditions in most of the Delta, we believe that the water quality conditions in the Delta will be determined more by the preferred storage and conveyance alternative than by implementation of the action strategies.	David Okita, *Solano County Water Agency*	10/8/97	
Executive Summary	Page E-4: Pathogens should be included in the discussion of key drinking water contaminants of concern.	David Okita, *Solano County Water Agency*	10/8/97	

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Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Executive Summary	Page E-7: The following statement in the report should be rewritten: "The strategies are recommended actions that will result in improvements to source water quality by reducing source loadings of parameters (e.g., mine drainage, agricultural drainage, urban and industrial runoff, and municipal and industrial wastewater treatment facilities); upgrading treatment plants; or changing water management practices." The statement implies that improvements to source water quality will result from upgrading water treatment plants. Water treatment plants will only be upgraded if source water quality conditions are not improved.	David Okita, *Solano County Water Agency*	10/8/97	

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Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Executive Summary	The agency is concerned that a natural process (the breakdown of naturally occurring organic materials in the Delta) is being characterized as pollution and laid at the doorstep or agricultural operations in the Delta. It is our belief that at least an equivalent amount of organic carbon would be generated by the natural decomposition of decaying plant materials and peat soils. In fact, such decomposition of organic materials form the very basis of the food chain upon which the ecosystem is dependent. We ask that you modify the report as follows: Page E-4, last paragraph: Of particular concern to drinking water is organic carbon generated by decomposition of the peat soils and plant biomass which occur in the Delta. Much of this organic carbon is currently collected and discharged to the Delta channels by agricultural drainage, although historically the same land mass drained naturally into the sloughs and channels of the Delta.	Thomas M. Zuckerman, *Central Delta Water Agency*	8/13/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* Rick's Response - undated: Thank you for your comments on the Component Report. I agree we need to be careful how organic carbon inputs to the Delta are portrayed. I also agree with your contention that evidence is lacking to prove organic carbon contributions from Delta islands under agricultural production are greater than might be the case under "natural" conditions. Therefore, there is inadequate scientific support for blaming Delta agricultural interests for causing pollution that exceeds historical conditions. On the other hand, discharges from islands do affect Delta water quality adversely with respect to drinking water supply. From this perspective, organic carbon is a pollutant. In my view, water quality degradation from whatever source is undesirable; and, I think this would be true of discharges from Delta islands whether resulting from agricultural practices or natural conditions. Therefore, I believe it should be CALFED's interest to support measures to reduce problems from this source where feasible, without an intention to single out individuals as causes of the problem. We do not intend to finalize the Draft Component Report, as this is only a working document provided for the use of the WQTG. We intend to incorporate your comments into the Water Quality Technical Appendix to the CALFED Programmatic EIR/EIS where this material will formally appear. Specifically, the changes you recommend to page E-4, last paragraph and page 3-5 first paragraph, seventh sentence, will be adopted. Your comments on Section 2, page 2-2 and page 3-5 last paragraph make reference to average DOC levels found in drinking water supplies in the U.S. We are aware of one or more nationwide surveys. However, it is not clear whether this reference is to one of these surveys or from another source. We would appreciate your providing us with specific support for the statements you recommend. October 27, 1997: References not provided by 10/27/97, so comment was not included in 10/31/97 version of Affected Environment document.

Topic	Comment	Person/ Organization	Date	Response
Executive Summary	Page E-6: Add "It is also possible that elevated heavy metals from acid mine drainage into the upper Sacramento River has affected salmon races other than the fall run."	Thomas R. Mongan	8/8/97	
Executive Summary	Page E-5: The paragraph on agriculture, the correct spelling is "sodium adsorption ratios." I noticed this appear elsewhere in the document, i.e., page 3-9.	Joseph McGahan, *Summers Engineering, Inc.*	11/13/97	
Executive Summary	Page E-4: Pathogens should be included in the discussion of key drinking water contaminants of concern.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Executive Summary	Page E-7: Under the section on "Identifying Sources of Problems," it should be noted that agricultural tail water or return flows also may contribute organic carbon.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Executive Summary	Page E-8: Table E-2 is missing from the report.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Executive Summary	Page E-7: The following statement in the report is inaccurate and should be revised in future documents: "The strategies are recommended actions that will result in improvements to source water quality and be reducing source loadings of parameters (e.g., mine drainage, agricultural drainage, urban and industrial runoff, and municipal and industrial wastewater treatment facilities); upgrading water treatment plants; or changing water management practices." This statement implies that improvements to source water quality will result from upgrading water treatment plants. Water treatment plants will only be upgraded if source water quality conditions are not improved.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: The statement has been reworded in the Water Quality Program Plan.

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Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Executive Summary and Introduction	Page ES-1 and 1-1: There is a statement that the objective to provide good water quality for all beneficial uses will be achieved through development and implementation of the CALFED Water Quality Program. Although full implementation of the action strategies will likely result in improved water quality conditions in most of the Delta, we believe that water quality conditions in the Delta and in export water supplies will be influenced more by the preferred storage and conveyance alternative than by implementation of the action strategies. Future documents need to recognize the important linkage between the CALFED Water Quality Common Program and the preferred storage and conveyance alternative in achieving CALFED's water quality targets. In addition, CALFED should seek to maximize opportunities for water quality improvements, where appropriate, in its other programs such as the Ecosystem Restoration Program.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: The Programmatic EIR/EIS addresses the effects of all CALFED actions and alternatives on water quality, fisheries, land use, etc. A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.
Executive Summary and Introduction	Page E-3 and 1-3: In the paragraph describing stakeholder groups, the list of participating agencies is incorrect.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Executive Summary and Background Section 2	Page E-4 and 2-3: In future documents we recommend that the impacts of high salinity on municipal water supplies be described as follows: "A major problem during periods of low Delta outflow is tidal mixing of salt into the Delta channels. Seawater intrusion is a major concern with regard to municipal drinking water supplies because of the presence in seawater of bromide, which contributes to the formation of carcinogenic disinfection by-products (DBPs). Salts are also present in freshwater inflows to the Delta due to municipal and agricultural discharges to the Delta in the San Joaquin River. High salt levels in municipal water supplies can result in the following impacts: 1) reduced opportunities for water recycling and groundwater replenishment programs which are dependent on good source water quality to meet local resource program salinity objectives; 2) economic impacts on industrial and residential water users due to corrosion of appliances, plumbing and industrial facilities; and 3) aesthetic impacts (i.e., taste problems) for drinking water consumers."	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Executive Summary and Background Section 2	Figure E-1 and Figure 2-1: From this figure, one could draw the conclusion that the Barker Slough Pumping Plant is outside of the area in which bromide and organic carbon are problematic. In fact, the organic carbon concentrations at the Barker Slough Pumping Plant routinely exceed the organic carbon concentrations found at the other Delta pumping plants.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Executive Summary and Background Section 2	Figure E-1 and Figure 2-1: From these figures, the conclusion could be drawn that the Barker Slough Pumping Plant is outside of the area in which bromide and organic carbon are problematic. In fact, the organic carbon concentrations at the Barker Slough Pumping Plant routinely exceed the organic carbon concentrations found at the other Delta pumping plants.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of the Affected Environment document. Organic carbon from local sources added to figure E-1 and 2-1.

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Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Executive Summary and Background Section 2	Figures E-1, 2 and Figure 2-1: Please add the District's new Los Vaqueros intake at Old River to the Drinking Water Intakes locations identified. For completeness, please note the District's Mallard Slough intake off the Sacramento River on the side opposite to Chipps Island. Please also note that the City of Antioch operates a drinking water intake on San Joaquin River at Antioch.	Richard A. Denton, *Contra Costa Water District*	8/15/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* Comment incorporated into October 31, 1997, version of the Affected Environment document.
Executive Summary and Background Section 2	Figures E-1,2 and Figure 2-1: Please add the District's new Los Vaqueros intake at Old River to the Drinking Water Intakes locations identified. For completeness, please note the District's Mallard Slough intake off the Sacramento River on the side opposite to Chipps Island (south side). Please also note that the City of Antioch operates a drinking water intake on San Joaquin River at Antioch. A map of their location is attached for your reference.	Richard A. Denton, *Contra Costa Water District*	8/15/97	
Executive Summary and Sources and Loadings of Parameters Section 4	Figure E-4 and 4-1: This figure is a useful tool for representing the approximate location and distribution of point source discharges and sources of municipal stormwater runoff to the Delta and its tributaries. However, the symbols for agricultural drains focus on specific agricultural drains and sloughs that discharge to the Delta and its tributaries, rather than on broad areas with similar agricultural land-use patterns. Although water bodies like Mud and Salt Sloughs and the Colusa Basin Drain may be dominated by agricultural dischargers and may essentially function as point source discharges to the San Joaquin and Sacramento Rivers, the manner in which agricultural drains are represented in figure E-4 does not represent the actual nonpoint source nature of agricultural sources of pollutants. In addition, the agricultural drain symbols draw attention to specific agricultural regions in the mapped area included in the figure and ignore many other areas that may have nonpoint sources of agricultural pollutants. Agricultural sources of parameters of concern would be more accurately represented by shading portions of the map that are predominately agricultural land-use.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

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Comments from Stakeholders
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Topic	Comment	Person/ Organization	Date	Response
Introduction Section 1	Stakeholder Involvement: There is growing consensus that the stakeholder involvement in formulating the current CALFED Water Quality Program has been far less than what should have taken place in developing this program. The initial round of meeting held last fall and winter developed documents that had a number of significant technical errors in proposed approaches for defining water quality problems and developing approaches for their management. There should have been a series of stakeholder meetings in which these issues were discussed and resolved. Instead CALFED staff has proceeded with Water Quality Program development, largely without stakeholder involvement. This could prove to be significantly detrimental to developing and implementing the CALFED Water Quality Management Program. It will be important for the CALFED Water Quality Program to develop a true broad-based stakeholder involvement approach for further program development, where draft materials are prepared in a high quality form, and provided to stakeholders, with adequate time for review before holding open stakeholder meeting(s) to discuss issues. There should be no more piecemeal review of draft documents. These meetings should not be like the August 6, 1997 meeting where there was limited opportunity to address issues in the depth that is necessary for proper program development.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Introduction Section 1	We suggest that CALFED add a glossary of acronyms in future reports.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Background Section 2	Page 2-4: Under "Environment" states that "Mercury can bioaccumulate in the upper levels of the food chain, affecting larger fish, birds and mammals." I would be interested in seeing any evidence that supports the position that bioaccumulation of mercury affects fish. Any statement of this type must be referenced to an authoritative source, since it is not in accord with what is generally known today, with respect to mercury bioaccumulation issues.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

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Comments from Stakeholders
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Topic	Comment	Person/ Organization	Date	Response
Background Section 2	Throughout this section the emphasis on nutrients is on algal blooms. The Delta also experiences other types of aquatic plant growth which are not algae. They should be mentioned.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Background Section 2	I would be interested in the references to the statement that industrial water is impacted by phosphate and ammonia at the concentrations that are likely to be present in Delta water. It would be highly unusual that phosphate and ammonia, present in Delta waters, are adverse to industrial water quality.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Background Section 2	Page 2-1: First paragraph provides a reference to Arthur and Ball, 1978. No references were provided in the draft Water Quality Technical Program report that was sent out for review, as well as subsequent drafts. This has been a problem with some previous WQTG reports, where interested parties have not been able to obtain a copy of the references that WQTG staff have cited as supporting a particular position that they have advocated. Material should not be sent out for review without references, since it means that the reviewers would have to examine the items at least twice in order to see if the references cited are appropriate and that the materials that were used by the author, which are supposed to be based on the references, do in fact represent proper interpretation of the reference material.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Background Section 2	Page 2-2: The report is correct in stating that synthetic organic chemicals are found in fish tissues at levels that exceed standards for human consumption. These chemicals are also found in concentrations that may impair reproduction of the fish.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment noted.
Background Section 2	Page 2-2: The discussion of mining does not contain any information on the beneficial use(s) that is (are) being impaired.	David Okita, *Solano County Water Agency*	10/8/97	

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Comments from Stakeholders
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Topic	Comment	Person/ Organization	Date	Response
Background Section 2	Page 2-3: Work by Dr. Joon Burau of USGS casts strong doubt on the concept of an "entrapment zone" position by Delta outflow, so the statement at the top of the page should be removed.	Thomas R. Mongan	8/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: There is controversy among the USBR, UESPA and the USGS. Stakeholders need to work out differences and reach a consensus which they can provide to CALFED. USEPA and USBR were contacted on October 27, 1997, and requested to reach consensus.
Background Section 2	Page 2-2: In the second paragraph, the last three sentences should be written as follows in future documents: "San Joaquin River flows are often very low in late summer and fall and have relatively poor water quality. In contrast, the Sacramento River, the largest tributary to the Delta, has relatively good water quality because of the large amount of dilution provided by runoff from the watershed and releases from storage reservoirs. Water quality characteristics of Delta inflows are intimately tied to land use in the upstream watersheds."	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Background Section 2	Page 2-2: For consistency, it is suggested that CALFED use the total organic carbon (TOC) parameter (as opposed to DOC) when discussing organic carbon impacts on drinking water supplies. TOC is listed as a parameter of concern to the drinking water beneficial use in CALFED Water Quality Program documents. The TOC level in water is generally considered a good indication of the amount of trihalomethanes and other disinfection by-products that are likely to form upon treatment and disinfection. Also, under USEPA's proposed Disinfectant/Disinfection By-product (D/DBP) rule, drinking water treatment requirements are based on source water TOC levels.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Background Section 2	Page 2-2: The report is correct in stating that synthetic organic chemicals are found in fish tissues at levels that exceed standards for human consumption. These chemicals are also found in concentrations that may impair reproduction of the fish.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

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Topic	Comment	Person/ Organization	Date	Response
Background Section 2	Page 2-2: The discussion of mining does not contain any information on the beneficial use(s) that is (are) being impaired.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

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Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Background Section 2	The agency is concerned with organic carbon being characterized as pollution caused by agricultural operations in the Delta. It is our belief that at least an equivalent amount of organic carbon would be generated by the natural decomposition of decaying plant materials and peat soils. We ask that you modify the report as follows: Page 2-2, the second bulleted sentence should be modified to read: Delta exports have ~~elevated~~ concentrations of dissolved organic carbon (DOC) which are comparable to average DOC concentrations found in raw water sources within the Western united States. DOC, when chlorine is used as a disinfect, is a disinfection by-product (DB) precursors. ~~and~~ As seawater intrusion occurs in the Western Delta, as a result of low Delta outflow, which is influenced by Delta exports, the potential for formation...	Thomas M. Zuckerman, *Central Delta Water Agency*	8/13/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* Rick's Response - undated: Thank you for your comments on the Component Report. I agree we need to be careful how organic carbon inputs to the Delta are portrayed. I also agree with your contention that evidence is lacking to prove organic carbon contributions from Delta islands under agricultural production are greater than might be the case under "natural" conditions. Therefore, there is inadequate scientific support for blaming Delta agricultural interests for causing pollution that exceeds historical conditions. On the other hand, discharges from islands do affect Delta water quality adversely with respect to drinking water supply. From this perspective, organic carbon is a pollutant. In my view, water quality degradation from whatever source is undesirable; and, I think this would be true of discharges from Delta islands whether resulting from agricultural practices or natural conditions. Therefore, I believe it should be CALFED's interest to support measures to reduce problems from this source where feasible, without an intention to single out individuals as causes of the problem. We do not intend to finalize the Draft Component Report, as this is only a working document provided for the use of the WQTG. We intend to incorporate your comments into the Water Quality Technical Appendix to the CALFED Programmatic EIR/EIS where this material will formally appear. Specifically, the changes you recommend to page E-4, last paragraph and page 3-5 first paragraph, seventh sentence, will be adopted. Your comments on Section 2, page 2-2 and page 3-5 last paragraph make reference to average DOC levels found in drinking water supplies in the U.S. We are aware of one or more nationwide surveys. However, it is not clear whether this reference is to one of t these surveys or from another source. We would appreciate your providing us with specific support for the statements you recommend. October 27, 1997: As of this date no references were provided. Unable to include comment in the October 31, 1997, version.

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Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Overall, the section on Parameters of Concern and their impacts is written rather loosely and does not properly present the basic and applied sciences pertinent to water quality issues. This section needs to be rewritten	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-1 provides a list of parameters that are of concern. Often a reference is made to a State Water Resources Control Board publication as justification for listing the parameter. However, there is no reference as to what publication is being cited. Further, it should be understood and discussed that the State Water Resource Control Board as well as the Central Valley RWQCB have certain legal constraints for listing parameters of concern which relate to Clean Water Act requirements. It is well understood, however, that many of these listings are not necessarily technically valid. While the parameter can be of concern certainly before any program is mounted to control that parameter by CALFED, actual adverse impact, due to the parameter, should be documented. The Parameter Assessment Team made it clear to CALFED Water Quality Program management at the meeting this spring that they should not mechanically use Clean Water Act designated parameters, but should in fact determine that the parameter that has made a particular Clean Water Act list is adverse to the beneficial uses of the Delta and/or its aquatic resources.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-3, first paragraph on "Organics/Pesticides" mentions the National Academy of Sciences standards. The National Academy of Sciences has not standards for excessive concentrations of bioaccumulatable chemicals. This is an error that was made by the Water Resources Control Board staff many years ago and it persists. CALFED should not persist in making this error. Further, as discussed in recent correspondence on CALFED's Water Quality Program, the key information on excessive concentrations of bioaccumulatable chemicals are the recent USEPA guidelines that were used in the fish bioaccumulation studies in San Francisco Bay, published by the State Water Resources Control Board in 1995, not the Food and Drug Administration values. FDA values are well known to be based on factors other than health effects, which tend to cause them to be significantly higher than those currently recommended by the USEPA.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	This chapter contains many statements that should be referenced with supporting data or reports. On page 3-5, the following statement is made with no supporting reference: "Organic materials enter the water from the following sources in the Delta in decreasing order of amounts: natural materials, vegetation, and organic soils; agriculture, as vegetative organics in drainage; urban runoff; municipal and industrial wastewater discharges; pesticides and herbicides." We are not aware of any studies that have adequately quantified the sources of organic materials to the Delta. In fact, the sources of organic material likely vary at each of the drinking water intakes in the Delta.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 28, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document by removing references to increasing order of importance.
Parameters of Concern Section 3	Page 3-4 under "Chloride" does not provide a reference to the statements made on the importance of chloride to agriculture.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-4, in the first sentence under "Disinfection Byproducts in Treated Drinking Water" the statement is incorrect with respect to "chloroform and brominated methanes." It should read chlorinated and brominated methanes, since there are other chlorinated forms of THMs that are not chloroform. In that same paragraph there is a statement "The suspected carcinogenic risk to humans from THMs has led some communities to study and change their methods of disinfection drinking water." Delete the word "to study." In the next sentence, I do not believe that "chloramination" leads to bromate. This is a problem related to ozone use with bromide present in the water. The statement in the last sentence of this paragraph about reduced "...removal of DBPs after being removed can reduce DBP levels but may be quite expensive." That is a comparative that needs to be discussed to properly understand its meaning and to reliably convey what the author thinks is expensive compared to what other might conclude. Based on MWD data, for 12-cents per person per day, the disinfection byproduct problem disappears; is that quite expensive? Comparatives of this type should be discussed so that the reader can understand the context of the writer's views on issues.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-4, end of the second paragraph, the statement is made: "(For more information on Chloride see Disinfection By-Products)." Examination of the disinfection byproducts section shows that there is essentially no discussion of chloride. There is a discussion of bromide. Bromide should be the chemical listed, not chloride in the referenced paragraph.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-5, the second paragraph discussion on the relative molecular weights of bromide versus chlorine is inappropriate when compared with the superficial discussion of many of the other key issues that need to be discussed, such as the availability of heavy metals to be toxic. To dwell on disinfection byproduct molecular weight issues and not discuss the relative availability of heavy metals as toxicants for aquatic life, is inappropriate. This is a problem throughout this draft. Some sections go into great detail about minor issues, with or without references, while in other sections blanket statements are made without references. Further, in some cases fundamental issues that will be strongly influential in formulating CALFED's programs are not discussed.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-5, the third paragraph on "Total and Dissolved Organic Carbon" mentions pesticides and herbicides as a source of TOC and DOC. Their concentrations in water would never represent a measurable increase in organic carbon.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-6, under "Dissolved Oxygen," the statement: "The capacity of water to dissolve oxygen decreases with increasing temperature and often varies with the cycle of daily photosynthetic activity of algae and plants" is incorrect. The capacity of water to dissolve oxygen (which should have been said is dissolved oxygen saturation) does not change with photosynthetic activity. The concentrations of dissolved oxygen change with photosynthetic activity. This kind of problem is persistent throughout the document where the statements made are not in accord with the basic science involved.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-6 under "Nutrients," the first sentence states that nitrogen and phosphorus "...trigger algal growth at elevated concentrations." Algal growth occurs at low concentrations as well; the nutrients trigger excessive algal growth. In the next sentence, it is stated that "...as nutrient concentrations increase algal productivity increases." Algal productivity is not the issue with respect to excessive fertilization. What is of concern is algal biomass. There are water bodies with high productivity, but relatively low biomass because of grazing.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-6 under "Nutrients," the statement "A self perpetuating cycle of nutrient enrichment, plant growth, accumulation of muck, oxygen depletion, and nutrient recycling from the sediment follow" is not an appropriate discussion of eutrophication issues. This characterization of the eutrophication process is in error. Nutrient residence times in water bodies is short compared to the hydraulic residence times. Nutrients tend to accumulate in sediments or are flushed out of the water body. Only a small part of the nutrients that enter the sediments are returned in algal available forms. It has been well known for over 25 years through eutrophication management programs that reducing the nutrient load to a water body results in the water body achieving a new level of eutrophication within three times the limiting nutrient residence time. The actual hold over from sediment accumulated nutrients is rapidly dissipated. In the same paragraph, the statement is made "Eventually, the rate of oxygen consumption can exceed the rate of absorption, resulting in, blue green algae blooms, odors, and eventually the death of fish and aquatic life." This is an inappropriate discussion of the development of blue green algae. Blue green algae do not develop because oxygen consumption rates exceed absorption. Further, the rate of oxygen production through photosynthesis exceeds the rate of consumption in the waters where the algae are present. There is a net surplus of dissolved oxygen in waters where there would be any significant transfer from the atmosphere into the water. With respect to the next paragraph on agricultural impacts of nutrients, do the nutrients in Delta water ever achieve concentrations that would affect agricultural through reduced yield, etc.? This is highly unlikely. The section on ag and nutrients needs to be rewritten.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-6, last paragraph states, "Because coliforms are more abundant than pathogens in human waste by several orders of magnitude, the tests provide a margin of safety against pathogens." That is only true for certain forms of pathogens and certainly does not apply to viruses and parasites	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

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Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Table 3-1: Add chloride to the list of Water Quality Parameters of Concern to Urban Uses.	Richard Denton, *Contra Costa Water District*	8/15/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.
Parameters of Concern Section 3	Table 3-2: Tables like this must have a source reference.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-8, first paragraph under "Parasites," needs to be rewritten. What is meant by "...severely disrupt the intestinal tract?" Is it referring to humans, animals, birds? The discussion in the second paragraph under "Giardia lambia," gets into far more detail than is appropriate for this type of document.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-8, under "Cryptosporidium parvum," the statement about "The oocyst (infective stage) dose necessary to cause an infection in humans is unknown..." is not in accord with what is known today. It is generally assumed today, based on substantial evidence, that one oocyst is needed to cause infection. This section relies on outdated information when references a 1986 publication on Cryptosporidium. There are far more up to date authoritative discussions of these issues than what is presented in this report.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-9, the first paragraph states, "...Cryptosporidium parvum levels do not correlate well with indicator coliform bacteria levels, so meeting standards for coliform and turbidity (a measure of the reduction of clarity of a water by suspended particles) may not be a sufficient measure of treatment reliability for removal of Cryptosporidium." There is not issue about "may;" this has been well known since the 1940s. Meeting coliform standards does not protect against parasitic protozoans.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-9, discussion of pH, is somewhat misleading. The issue is not pH, but the deposition of scale forming chemicals. Again, no reference is provided to the source of this information.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-9, under "Sodium Absorption Ratio (SAR)," makes an error in the use of the term "absorption." It is not "absorption" but adsorption. These are significantly different processes. The word "absorbed," as used in this section, is incorrect.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-10 lists a CUWA/CALFED 1996 publication concerning salinity effects on agriculture. I would like to receive a copy of that publication.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-10, the statement "Electrical Conductivity (EC), more correctly known as specific conductance..." is incorrect. Specific conductance is a measure of electrical conductivity, it is not more correct. Specific conductance refers to measurements with a certain electrode area and spacing. In the same paragraph, "EC is generally considered a conservative parameter..." is also an error. EC in a high calcium carbonate system is not a conservative parameter.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-10, in the fourth paragraph, "...crop uptake and evaporation remove pure water with some dissolved salts...", what is meant by "pure water?" Crops remove water.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-11, in the "Temperature" section, the statement is made that "Temperature governs rates of biochemical processes..." It also determines the rate of chemical processes. There are some biochemical processes, such as photosynthesis that are not affected by temperature.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Table 3-1: The second column heading should be "Drinking Water" rather than "Urban."	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 24, 1997: Prepared response indicating issue should be raised at the Water Quality Technical Group meeting on December 3, 1997, for consideration and forwarded to Rick Woodard for review. Forwarded to David Okita November 17, 1997, after review by Rick Woodard. No change for October 31, 1997, version of Affected Environment document.
Parameters of Concern Section 3	Page 3-10: The listing of sources of salt to the Delta needs to include upstream municipal and industrial wastewater discharges.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Municipal and industrial wastewater incorporated as another source in the October 31, 1997, version of the Affected Environment document.

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-11, under "Turbidity," the end of the statement "...of sediment material, or biological productivity" is incorrect. Again, it is not productivity, but biomass that causes turbidity. How fast the organisms are growing does not affect turbidity. They can be eaten as fast as they are growing and still cause little turbidity in the system. The statement, "Following major storms, water quality is often degraded by inorganic and organic solids and associated adsorbed contaminants (such as metals, nutrients, and agricultural chemicals) that are re-suspended or introduced in runoff" is loosely written and is not in accord with what is well known in the field. Particulate forms of constituents, such as heavy metals are not available to degrade water quality. This is not new information. The National Academy of Sciences and Engineering in their 1972 Bluebook Water Quality Criteria made it clear that particulate forms of heavy metals are non-toxic. The USEPA acknowledged this and began to change the implementation of its water quality criterion in 1992. This was formally adopted in 1995.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-12, "Data Available," states: "Data evaluation will be used more extensively as part of the EIR/EIS impact assessment process." From the problems found in this draft report, hopefully that data evaluation will more appropriate address water quality issues than has been done in this draft report, If this does not occur the data evaluation could be unreliable.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Page 3-12: "Target Ranges for Parameters," states: "For some parameters, particularly those affecting environmental beneficial uses, source water quality regulatory standards, objectives or criteria have been developed." What is meant by "source water quality?" The criteria, standards and objectives are not related to any particular source water quality; they are ambient water quality.	G. Fred Lee	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Table 3.4: Significant technical errors have been made by CALFED management and staff in development of this table. All reference to sediment target ranges should be deleted from the table. They are based on Long and Morgan co-occurrence values which assume, without verification, that there is a cause and effect relationship between the total concentration of a constituent in sediments and its water quality impacts. It has been well documented for 25 years that this is an invalid assumption. For CALFED to assert that these are reliable target values against which tens of millions of dollars will be spent to try to achieve shows a complete lack of understanding of sediment quality issues and the vast amount of work that has been done on this topic. The USEPA and Corps of Engineers conducted over 50 million dollars in research devoted to developing approaches for regulating open water disposal of contaminated dredge sediments. Based on the results of the research, the USEPA and the Corps of Engineers adopted an effects-based regulatory approach rather than a chemically based approach. This is the approach that CALFED should be using.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/987	
Parameters of Concern Section 3	Table 3.4: A significant error occurs with respect to the target range tissue concentrations. As has been discussed in materials provided to CALFED, there are no reliable tissue concentrations of constituents that are recognized by the National Academies of Science and Engineering, the USEPA, other states, etc. The tissue concentration that should be used as target values are those that are set forth on Table 1 on page 97 of "Contaminant Levels in Fish Tissue from San Francisco Bay," Final Report, San Francisco Bay Regional Water Quality Control Board, California Department of Fish and Game Marine Pollution Studies Laboratory, June, 1995. If there is no USEPA guidance value for a constituent, then CALFED should not use the NAS/NAE value. The NAS/NAE values are badly out of date and do not reflect what is known today about the effect of chemicals on human health as a result of bioaccumulation in fish tissue.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	With respect to the metals and other constituents in Table 3.4, which use as their basis the USEPA Water Quality Criteria, the values given should be replaced by the recently published proposed USEPA criteria for the California Toxics Rule, with the understanding that these values will be modified if changes are made through the adoption of these values. The final version of this report should include a discussion of the fact that CALFED recognizes that USEPA Water Quality Criteria for some constituents such as heavy metals will likely be overprotective due to differences between water characteristics in the CALFED area of concern and the waters in which the criteria were developed. With respect to copper, it is well known that copper is present in many parts of the CALFED waters at concentrations well above Table 3.4 values without being toxic. For CALFED to spend Prop 204 money controlling copper inputs because the concentrations of copper at some locations exceed USEPA criteria when appropriate conducted toxicity tests show that the copper is in a non-toxic form will lead to significant problems for the credibility of CALFED's wise use of public funds.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Parameters of Concern Section 3	Table 3.4: The CALFED Water Quality Program needs to start over with respect to developing Table 3.4 in which the chemical based approach for sediment quality is abandoned in favor of a biological effects based approach. The NAS/NAE tissue approach should be abandoned in favor of USEPA guidelines for excessive concentrations in fish tissue that were developed for San Francisco Bay fish. Further, the USEPA water quality criteria set forth in Table 3.4 should be changed to the California Toxics Rule values where it is clearly indicated that these are triggers for further work designed to evaluate whether exceedances of the criteria represent real water quality use impairments that justify the use of CALFED money for their control.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Table 3-4: The target values for a number of water quality parameters of concern are considerably less protective of drinking water supplies than those recommended by the urban drinking water subgroup of the CALFED Parameter Assessment Team. The target levels found in Table 3-4 are also inconsistent with indicators of success contained in Section 7: For example: • The PAT recommended no increase in nitrate levels and a decrease in phosphorus levels, where Table 3-4 sets a limit of 10 mg/L at drinking water intakes and does not mention phosphorus. • The PAT recommended a pathogen target level of <1oocyst/100L, whereas Table 3-4 states there is "no MCL standard." • The PAT recommended a 10 year average of <220 mg/L and a monthly average of 440 mg/L for total dissolved solids, whereas Table 3-4 contains a target of 500 mg/L for drinking water intakes. • The PAT recommended a monthly median of 50 NTU for turbidity. The turbidity level of 0.5 to 1.0 NTU contained in Table 3-4 is a treatment technology requirement for treated drinking water supplies, and use of this value is not necessary for raw water supplies.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The targets recommended by the Parameter Assessment Team were incorporated into the Affected Environment document and are reflected in the October 31, 1997, version. Phosphorus was not included as one of those targets. However, a follow-up response has been prepared to the USFWS asking to present the issue of adding phosphorus to the parameter of concern list at the December 3, 1997, Parameter Assessment Team meeting and forwarded to Rick Woodard for review. Forwarded to USFWS on November 11, 1997, after review by Rick Woodard.
Parameters of Concern Section 3	Table 3-4: The 3-7 ppm selenium (dry weight) target range for fish food should not be used without supplying detailed scientific justification to explain why levels this low are needed under conditions in the San Joaquin Valley.	Thomas R. Mongan	8/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment noted. Reference is the San Luis Drain Reuse Technical Committee Guidelines.
Parameters of Concern Section 3	Page 3-5: This chapter contains many statements that should be referenced with supporting data or reports. For example, the following statement is made with no supporting evidence: "Organic materials enter the water from the following sources in the Delta in decreasing order of amounts: natural materials, vegetation, and organic soils; agriculture, as vegetative organic in drainage; urban runoff; municipal and industrial wastewater discharges; pesticides and herbicides." We are not aware of any studies that have adequately quantified the sources of organic materials to the Delta. In fact, the sources of organic material likely vary at each of the drinking water intakes in the Delta.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Table 3-1: The second column heading should be "Drinking Water" rather than "Urban."	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Page 3-2: Some of the statements regarding the beneficial use impacts of the parameters of concern are very general and do not provide much information to the reader (e.g., "Mercury is of concern from an environmental and human health perspective."). It is suggested that CALFED include more detailed information regarding the adverse impacts of metals, mercury and selenium on aquatic wildlife, the environment and human health, and include references.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Page 3-3: The first and second paragraphs under Organic/Pesticides are inconsistent as to whether or not pesticides have been detected in sediment and fish tissues in the delta at levels that are a concern to human health or aquatic wildlife. It is suggested that the following sentence be added to the first paragraph: "Pesticide loading from agricultural and urban sources is a concern throughout the Delta and its tributaries due to potential toxic effects of the pesticides on aquatic organisms (including algae, invertebrates and fish), particularly sensitive life stages of aquatic organisms.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Page 3-3: The statement in the second paragraph that "pesticides are rarely detected in Delta water samples" is inaccurate. Based on daily sampling by the U.S. Geological Survey at Vernalis, some pesticides were detected more than 50 percent of the time.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Page 3-3: CALFED needs to add a description of the adverse impacts of ammonia on aquatic wildlife and the environment and a description of unknown toxicity to this section of the report.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-4: In the section regarding disinfection by-products in treated drinking water, it is suggested that CALFED include a brief discussion on USEPA's proposed D/DBP Rule, including the general requirements in the rule and the schedule. Anticipated future drinking water regulations are the driving force behind the need for improved source water quality for drinking water supplies. A description of this proposed rule is contained in the California Urban Water Agency (CUWA) Bay-Delta Drinking Water Quality Criteria report submitted to CALFED in December, 1996.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Page 3-5: In the second paragraph, the second sentence should be revised as follows in future documents: "As with organic carbon, bromide reacts with drinking water disinfectants to form DBPs, including brominated THMs and other brominated DBPs, which are also a human health concern."	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Page 3-5: In the last paragraph, the fourth and fifth sentences should be removed and placed in the paragraph on page 3-4 which discusses DBPs in drinking water.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Page 3-5: The sentences at the end of the last paragraph, starting with the word "Minimizing...," should be revised to read as follows: "Minimizing TOC concentrations in source waters is a major water quality goal for drinking water suppliers, in order to meet future drinking water regulations for DBPs. In USEPA's proposed Disinfectant/Disinfection By-product (D/DBP) Rule (Stage 1 and Stage 2 of the D/DBP Rule are scheduled to be finalized in November 1998 and May 2002, respectively) maximum contaminant levels (MCLs) for THMs will be lowered, and treatment requirements will be based on source water TOC levels. The proposed rule will require utilities to undertake studies to control organic carbon in their source water and to achieve a certain percent TOC removal at the treatment plant based on the source water TOC concentration, in cases where source water TOC levels exceed 2 mg/l. The proposed D/DBP Rule treats TOC as a source water quality parameter that must be controlled."	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-6: The following revisions are suggested for future CALFED documents: At the end of the first paragraph under Nutrients add the following: "Nutrients are a critical reservoir management issue. Nutrient levels are a determining factor governing the growth of taste-and-odor producing algae in drinking water storage reservoirs, and high nutrient levels can lead to aesthetic impacts on drinking water supplies."	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Page 3-6: The following revisions are suggested for future CALFED documents: In the Pathogens section, it is suggested that CALFED include a brief description of USEPA's proposed Enhanced Surface Water Treatment Rule, including the anticipated schedule for the rule and the proposed pathogen removal/inactivation requirements which are based on pathogen density in source water. In the first sentence of the Pathogens section, add "and pathogenic" after the word "coliform." The second paragraph in the Pathogens section should be revised to read as follows: "Principal waterborne bacterial agents that cause human intestinal disease are summarized in Table 3.2. Rather than attempt to analyze each of these pathogenic bacteria, water utilities routinely monitor for total and fecal coliform bacteria, an indicator organism. With few but notable exceptions, these organisms, which originate in the intestinal tract of warm-blooded animals and other sources, are not pathogenic. Although monitoring coliforms as indicators of fecal pollution and potential presence of pathogens has limitations, they are still the most widely used indicators of bacterial water quality. Coliforms are the traditional indicator of fecal contamination and are easier to assay than the pathogenic organisms. Nonetheless, there are numerous reports where pathogens have been isolated and coliforms were not detected."	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-7: In the first paragraph, the last sentence should be removed and replaced with the following in future documents: "The enteroviruses (polio, coxsackie A, coxsackie B, and echoviruses), adenoviruses and reoviruses can be detected by conventional laboratory cell culture techniques. Hepatitus A virus and rotavirus require specialized cell culture techniques. Methods for detection of the other enteric viruses are not really available."	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Table 3.2: Delete *Leptospira* sp. and *Francisella tularensis* from the table.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Table 3.3: Delete Hepatitus B Virus from the table since it is not an enteric virus. Add "Hepatitus E Virus" to the table and list "viral hepatitis type E" as the common disease syndrome. Add "Astroviruses" and "Coliciviruses" to the end of the table and include gastroenteritis as their common disease syndrome.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Page 3-8: At the end of the paragraph on parasites, add the following sentence: "Of more recent concern are emerging enteric protozoa such as Cyclospora, although their role in waterborne disease has not been well ascertained."	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Page 3-9: Add a paragraph regarding existing pathogen detection methods and their limitations.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-9 and 3-10: In future documents, the first sentence in the salinity section should be revised to read as follows: "Salinity is of concern to municipal water suppliers because (1) bromide, a component of saline water, contributes to the formation of DBP's (bromate and brominated THMs); (2) low salinity water supplies are needed to assure the feasibility of local wastewater reclamation and conjunctive use projects; (3) low salinity water supplies are needed to minimize the economic impacts on industrial and residential water users from the corrosion of infrastructure and appliances; and (4) low salinity water supplies are needed to improve the aesthetics of drinking water." Since salinity is included in Table 3.1 as a parameter of concern for the environment it is suggested that CALFED include a description of the impact of salinity on the environment in this section.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Parameters of Concern Section 3	Page 3-10: The listing of sources of salt to the Delta needs to include upstream municipal and industrial wastewater discharges.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Table 3-4: The target values for a number of water quality parameters of concern are considerably less protective of drinking water supplies than those recommended by the urban drinking water subgroup of the CALFED Parameter Assessment Team. The target levels found in Table 3-4 are also inconsistent with indicators of success contained in Section 7. For example: 1 The PAT recommended no increase in nitrate levels and a decrease in phosphorus levels, whereas Table 3-4 sets a limit of 10 mg/L at drinking water intakes and does not mention phosphorus. Water quality impacts of nutrients are driven by reservoir management issues as opposed to human health effects; as a result, use of the MCL for nitrate (as N) of 10 mg/L as a target range is not appropriate. 2. The PAT recommended a pathogen target level of <1 oocyst/100L, whereas Table 3-4 states there is "no MCL standard." 3. The PAT recommended a 10 year average of <220 mg/L and a monthly average of 440 mg/L for total dissolved solids, whereas Table 3-4 contains a target of 500 mg/L for drinking water intakes. 4. The PAT recommended a monthly median of 50 NTU for turbidity. The turbidity level of 0.5 to 1.0 NTU contained in Table 3-4 is a treatment technology requirement for treated drinking water supplies, and use of this value is not necessary for raw water supplies.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	12/20/97: The target levels provided by the Parameter Assessment Team have been incorporated, where appropriate. On December 3, 1997, a meeting between the drinking water industry, USEPA, and CALFED was held to identify source water quality targets for bromide and TOC. Water quality impacts to drinking water supplies and the ecosystem are being evaluated in the CALFED programmatic EIR/EIS.
Parameters of Concern Section 3	Page 3-13: The USGS is currently carrying out comprehensive monitoring studies in the San Joaquin River Basin and the Sacramento River Basin as part of the National Water Quality Assessment (NAWQA) Program. The NAWQA studies are a valuable source of recent water quality information, and we suggest that CALFED contact the USGS and include available relevant USGS water quality data in the CALFED Water Quality Affected Environment Report.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	There are gaps in the report with regard to significant water quality impacts and beneficial uses which have been overlooked and under evaluated. **Pesticides, Dioxins, PAH's** are under-represented or absent in terms of potential impacts. The use of pesticides, especially those that cause cancer have risen dramatically in the past five years (Rising Toxic Tide - Californians for Pesticide Reform, August 1997, also comments from Communities for a Better Environment enclosed). If the data is unavailable, the research should be made a high priority.	Marguerite Young, *Clean Water Action*	10/28/97	11/17/97: Ms. Young was invited to present information and scientific evidence regarding the addition of dioxins and PAHs to the CALFED Water Quality Program parameters of concern. 12/3/97: At the request of Ms. Young, a copy of her comment dated October 28, 1997, regarding dioxins and PAHs was provided to the Parameter Assessment Team. mid-December/97: Ms. Young was invited to present or send a representative to present information and scientific evidence regarding the addition of dioxins and PAHs to the CALFED Water Quality Program parameters of concern. 1/28/98: Ms. Young nor a representative of Ms. Young was in attendance at the Parameter Assessment Team meeting.
Parameters of Concern Section 3	There are gaps in the report with regard to significant water quality impacts and beneficial uses which have been overlooked and under evaluated. **Illegal Methamphetamine Labs**, according to the SF Chronicle (10/6/97), have become the # 2 hazardous waste problem in the state. Each pound of meth results in 7 pounds of carcinogenic, toxic red sludge which may be getting dumped routinely into Delta waters. CALFED should coordinate with USEPA and local law enforcement to ascertain the extent of met production on house boats/Delta islands-- especially given that San Joaquin, Sacramento, and Contra Costa counties are in the top six counties with the most met labs.	Marguerite Young, *Clean Water Action*	10/28/97	

Topic	Comment	Person/ Organization	Date	Response
Parameter of Concern Section 3	There are gaps in the report with regard to significant water quality impacts and beneficial uses which have been overlooked and under evaluated. Water quality impacts to users **outside the Delta?** How will CALFED address the mercury problem associated with the North Bay Aqueduct? What about water quality degradation for area of origin users who may have to substitute water sources through conjunctive use or other water supply programs?	Marguerite Young, *Clean Water Action*	10/28/97	
Parameters of Concern Section 3	For determination of criteria for water quality parameters of concern, CALFED targets ranges should distinguish between freshwater and saltwater (or rather brackish water), since many compounds form complexes in saltwater that are less bioavailable.	Inge Werner, *Environmental Water Caucus*	10/28/97	
Parameters of Concern Section 3	CALFED 1 hour maximum criteria are too high. How would monitoring programs during which samples are often taken on a monthly basis determine 4-day average concentrations? The potential inability to do so opens the door to the much less stringent 1 hour maximum values. These are up to more than 100.000 higher (toxaphene) then 4 day average concentration: chlordane: 2.4 g/L (4-day average) vs. 0.0043 g/L (1 hour maximum). Selenium :20 g/L vs. 5 g/L; DDT 1.1 g/L vs. 0.001 g/L. Toxaphene: 0.73 g/L vs. 0.0002 g/L. Lowest observed effect concentrations (LOEC) rather than LC50 data should be used to set criteria. The measured carbofuran LOEC for juveniles of mysid shrimp (mysidopsis bahia) is 0.004 g/L!	Inge Werner, *Environmental Water Caucus*	10/28/97	
Parameters of Concern Section 3	Bioaccumulation potential of compounds of concern should be taken into account where data is available. Where no data is available, CALFED should promote research to obtain it. As suggested by the DeltaKeeper, aquatic life toxicity in the Delta should be studied. Establish a Delta monitoring program similar to the SF Bay program, including runoff studies and pesticides monitoring. Compounds of concern are not comprehensive enough.	Inge Werner, *Environmental Water Caucus*	10/28/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	The potential bioaccumulation of certain pollutants should be considered when establishing target ranges for water quality parameters.	Inge Werner, *UC Davis*	8/15/97	RICK'S Response - 8/18/97: The target ranges for bioaccumulating pollutants will be taken into account to the extent that we can provide adequate scientific support for the targets. I am sure you would agree that successful extrapolation of environmental concentrations to tissue concentration is very difficult in most cases. I believe that, as part of our adaptive management approach, we should be engaging in studies designed to enable us to better understand bioaccumulation phenomena affecting the species in the Bay-Delta estuary. *Appears in 10/31/97 Resolution Plan for Water Quality* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.
Parameters of Concern Section 3	Page 3-3: We would like to see some explanation of the TIE process and some explanation of the limitations of this process with regards to Ceriodaphnia and organophosphate insecticides. Novartis has completed a comprehensive "Ecological Risk Assessment of Diazinon in the Sacramento and San Joaquin River Basins." This report has been sent to you under a separate cover.	Dennis Kelly, *Novartis Crop Protection, Inc.*	10/3/97	

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	Page 3-4: A discussion on the importance of a low level of chloride concentration in municipal water supplies is warranted. The District recommends adding the following paragraph: *Chloride is used as a surrogate parameter for setting salinity standards for municipal and industrial uses, and the same concerns discussed under the heading Salinity in this section apply to chloride. Under existing standards (the 1995 Water Quality Control Plan) maximum chloride level is 150 mg/L at urban intakes in the Delta for between 155 and 240 days of the year (depending on the water year type) and 250 mg/L the rest of the year. The Contra Costa Water District has adopted a 65 mg/L chloride (and 50 mg/L sodium) goal for its delivered water quality and has invested $450 M in its Los Vaqueros Reservoir Project toward meeting this goal.*	Richard A. Denton, *Contra Costa Water District*	8/15/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document except for the following: The Contra Costa Water District has adopted a 65 mg/L chloride (and 50 mg/L sodium) goal for its delivered water quality and has invested $450 M in its Los Vaqueros Reservoir Project toward meeting this goal.
Parameters of Concern Section 3	Page 3-4: The discussion on Disinfection Byproducts in Treated Drinking Water - Identifying chloride with bromide in the discussion could be misleading. Chloride in itself does not contribute to DBPs and should be removed from the subsection heading.	Richard A. Denton, *Contra Costa Water District*	8/15/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.
Parameters of Concern Section 3	Pages 3-9, 3-10: In the first paragraph, please add "(5) health concern for people on low sodium diets" to the list on salinity concerns to municipal users. Add the following paragraph: *Chloride is used as a surrogate parameter for setting salinity standards for municipal and industrial uses. Under existing standards (the 1995 Water Quality Control Plan) maximum chloride level if 150 mg/L at urban intakes in the Delta for between 155 and 240 days of the year (depending on the water year type) and 250 mg/L the rest of the year. For water in the Delta, chloride levels of 150 mg/L and 250 mg/L correspond to total dissolved solids concentrations of about 390 and 570 mg/L respectively, and electrical conductivities of about 700 and 1050 μS/cm, respectively.*	Richard A. Denton, *Contra Costa Water District*	8/15/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	This section gives the implication that the potential impacts described for each parameter are occurring in the Delta. It would be beneficial to qualify this discussion so it is not misinterpreted.	Jerry Troyan, *Sacramento Regional County Sanitation District*	8/13/97	Rick's Response - undated: Thank you for your consistent participating in the Water Quality Technical Group and for your comments on the Water Quality Program Component Report which as usual, are very helpful. We intend to adopt your suggestions wholesale, except we are still smuggling with the use of the 303(d) list. Your suggestion to use Basin Plan objectives and 304(a) criteria will receive careful consideration, and we may call on you to discuss this further, or otherwise help us reach closure on this issue. Your help and that of our other steady partners on the WQTG will certainly result in an improved CALFED water quality program.

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	The agency is concerned with organic carbon being characterized as pollution caused by agricultural operations in the Delta. It is our belief that at least an equivalent amount of organic carbon would be generated by the natural decomposition of decaying plant materials and peat soils. We ask that you modify the report as follows: Page 3-5, first full paragraph, seventh sentence should be modified as follows: Sources of Br^- in Delta water are sea water intrusion, San Joaquin River inflow containing agricultural drainage from lands irrigated with water containing bromides delivered by the export products from the Delta, and possibly...	Thomas M. Zuckerman, *Central Delta Water Agency*	8/13/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* Rick's Response - undated: Thank you for your comments on the Component Report. I agree we need to be careful how organic carbon inputs to the Delta are portrayed. I also agree with your contention that evidence is lacking to prove organic carbon contributions from Delta islands under agricultural production are greater than might be the case under "natural" conditions. Therefore, there is inadequate scientific support for blaming Delta agricultural interests for causing pollution that exceeds historical conditions. On the other hand, discharges from islands do affect Delta water quality adversely with respect to drinking water supply. From this perspective, organic carbon is a pollutant. In my view, water quality degradation from whatever source is undesirable; and, I think this would be true of discharges from Delta islands whether resulting from agricultural practices or natural conditions. Therefore, I believe it should be CALFED's interest to support measures to reduce problems from this source where feasible, without an intention to single out individuals as causes of the problem. We do not intend to finalize the Draft Component Report, as this is only a working document provided for the use of the WQTG. We intend to incorporate your comments into the Water Quality Technical Appendix to the CALFED Programmatic EIR/EIS where this material will formally appear. Specifically, the changes you recommend to page E-4, last paragraph and page 3-5 first paragraph, seventh sentence, will be adopted. Your comments on Section 2, page 2-2 and page 3-5 last paragraph make reference to average DOC levels found in drinking water supplies in the U.S. We are aware of one or more nationwide surveys. However, it is not clear whether this reference is to one of these surveys or from another source. We would appreciate your providing us with specific support for the statements you recommend. October 28, 1997: No references provided as of this date. Comments not incorporated into October 31, 1997, version of Affected Environment.

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	The agency is concerned with organic carbon being characterized as pollution caused by agricultural operations in the Delta. It is our belief that at least an equivalent amount of organic carbon would be generated by the natural decomposition of decaying plant materials and peat soils. We ask that you modify the report as follows: Page 3-5, last paragraph should be modified as follows: MWQI studies have documented that Delta exports contain ~~relatively high~~ concentrations of DOC which are representative of average concentrations found in raw drinking water in the Wester United States. .....decomposing peat soil and crop residues ~~are the major sources of DOC~~ in the Delta contribute on the average some 20 % of the DOC in the water which are exported from the Delta. ....Utilities must undertake ~~studies~~ efforts to control organic carbon in their source water if TOC exceeds 2 mg/l at the water intake or modify disinfection methods to reduce the formation of THM compounds during disinfection.	Thomas M. Zuckerman, *Central Delta Water Agency*	8/13/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* Rick's Response - undated: Thank you for your comments on the Component Report. I agree we need to be careful how organic carbon inputs to the Delta are portrayed. I also agree with your contention that evidence is lacking to prove organic carbon contributions from Delta islands under agricultural production are greater than might be the case under "natural" conditions. Therefore, there is inadequate scientific support for blaming Delta agricultural interests for causing pollution that exceeds historical conditions. On the other hand, discharges from islands do affect Delta water quality adversely with respect to drinking water supply. From this perspective, organic carbon is a pollutant. In my view, water quality degradation from whatever source is undesirable; and, I think this would be true of discharges from Delta islands whether resulting from agricultural practices or natural conditions. Therefore, I believe it should be CALFED's interest to support measures to reduce problems from this source where feasible, without an intention to single out individuals as causes of the problem. We do not intend to finalize the Draft Component Report, as this is only a working document provided for the use of the WQTG. We intend to incorporate your comments into the Water Quality Technical Appendix to the CALFED Programmatic EIR/EIS where this material will formally appear. Specifically, the changes you recommend to page E-4, last paragraph and page 3-5 first paragraph, seventh sentence, will be adopted. Your comments on Section 2, page 2-2 and page 3-5 last paragraph make reference to average DOC levels found in drinking water supplies in the U.S. We are aware of one or more nationwide surveys. However, it is not clear whether this reference is to one of these surveys or from another source. We would appreciate your providing us with specific support for the statements you recommend. October 28, 1997: No references provided as of this date. Comments not incorporated into October 31, 1997, version of Affected Environment document.

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	The target values for a number of water quality parameters of concern are considerably less protective of drinking water needs than those recommended by the urban drinking water subgroup of the CALFED Water Quality Parameter Assessment Team. In particular: • The values for chloride (250 mg/L) and TDS (500 mg/L) would represent a relaxation of existing water quality objectives under the 1995 Water Quality Control Plan (which requires a number of days below 150 mg/L that vary according to the water year type) and SWP objectives (which has a 220 mg/L long term average and 440 mg/L monthly average), respectively. The District recommends that the lower values for TDS and chloride be adopted. • No MCLS were identified for pathogens. The pathogen target level of 1 oocyst/100 mL for *Giardia* and *Cryptosporidium* proposed by the Parameter Assessment Team would reduce the disinfectant dosage required for water treatment and could be necessary to allow urban water agencies to meet Stage 2 of the Disinfectant/Disinfection Byproduct Rule. The District recommends that the 1 oocyst/100mL objective be adopted. • The nutrient limit of 10 mg/L might be protective of human health, but may not be adequate to protect urban water reservoirs from potential algal blooms and taste and odor problems.	Richard A. Denton, *Contra Costa Water District*	8/15/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.
Parameters of Concern Section 3 and Sources and Loadings of Parameter of Concern Section 4	According to the titles of the report section, Section 3 is to describe the parameters of concern and Section 4 is to present the sources and loadings of the parameters of concern. We suggest that CALFED limit the information included in Section 3 to a description of the water quality parameters of concern, the sources of the parameters in general, and the beneficial uses that are impacted by the parameters and how, including references where appropriate. All discussion of specific sources of water quality parameters and loading estimates should be handled in Section 4. We recognize that this report will not be revised but we are making this recommendation for CALFED's use in future documents.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Sources and Loadings of Parameters of Concern Section 4	Page 4-1, "Sources of Parameters," as the first bulleted item, lists "cadmium, copper, zinc, and mercury;" page 2-2 lists chromium as a constituent derived from historical mining activities. Should chromium be on the list of constituents of concern? Chromium VI is one of the constituents that, based on information developed since the early 1980s, is not being adequately regulated to protect aquatic life from toxicity.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Sources and Loadings of Parameters of Concern Section 4	Page 4-1, bulleted items: Several issues arise from the page 4-1 bulleted items such as whether mercury is a problem associated with acidic mine drainage. Under the second bulleted item, is selenium an important constituent in urban stormwater runoff? What is meant by "...municipal and industrial discharges...?" Should this be wastewater discharges?	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Sources and Loadings of Parameters of Concern Section 4	This section should be omitted from the Component Report. It presents sketchy data and is inaccurate in a number of respects, as to give a significantly wrong impression on key areas. What should be done is to present a discussion of the data gaps that exist in developing meaningful loading parameter estimates.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Sources and Loadings of Parameters of Concern Section 4	Page 4-1: The listing of sources of water quality parameters of concern in the Delta and its tributaries should also include timber harvesting, road construction, dairies and confined animal facilities.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Sources and Loadings of Parameters of Concern Section 4	Page 4-1: Under the heading "Sources of Parameters" there is a discussion of mine drainage but there is no discussion of the other sources of parameters. Either the mine drainage discussion is out of place or the information on the other sources of contaminants was inadvertently deleted from the report.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.

Topic	Comment	Person/ Organization	Date	Response
Sources and Loadings of Parameters of Concern Section 4	Page 4-2, "Loadings of Parameters": This section should contain a discussion of each of the parameters, the sources, the loading calculations, the opinion of CALFED staff on the adequacy of the data used to estimate loads, and the opinion of CALFED staff on additional data needed to adequately characterize the loads. Although Section 3 of this report describes a number of ongoing monitoring programs, it appears that the data used in the loading calculations were limited to a few sources. The CVRWQCB report on loading in 1985 is cited throughout the supporting appendix describing the loading calculations. Data from more recent and more extensive monitoring programs would provide a much better analysis of loads. For example, data should be used from the Sacramento Coordinated Monitoring Program, the urban runoff monitoring programs of major Central Valley cities, and wastewater effluent monitoring programs.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Sources of Loadings of Parameters of Concern Section 4	Page 4-4, "Background Loads": The report acknowledges the difficulties associated with not determining the background loads, particularly for trace elements, but then loads are presented with no footnote or explanation that acknowledges this problem.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Sources and Loadings of Parameters of Concern Section 4	Tables 4-1 through 4-10: The columns in these tables should be consistent and should match the order in which data are presented in the corresponding figures. For example, all tables and figures should be ordered from upstream to downstream. A map showing the boundaries of the subwatersheds would be useful to readers.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.

Topic	Comment	Person/ Organization	Date	Response
Sources and Loadings of Parameters of Concern Section 4	Table 4-1, Bromide Loadings: Seawater is the major source of bromide to the Delta but the loading of bromide from seawater is not calculated. This table and corresponding figure imply that the San Joaquin Basin is the major source of bromide. In reality, much of the bromide loading from the San Joaquin Basin is due to recirculation of bromide in export water that is used in the San Joaquin Basin and then discharged back into the San Joaquin River.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Sources and Loadings of Parameters Section 4	Page 4-2: The time history of metal loading from acid mine drainage should be discussed to help determine if mine drainage was an important contribution to the decline of Sacramento River salmon. Val Connor at CVRWQCB has done important work in this area.	Thomas R. Mongan	8/8/97	October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Sources and Loadings of Parameters Section 4	Page 4-11, Table 4-6: A footnote should be added: "Industrial loading from refineries is primarily the selenite form of selenium. Loading from agricultural drainage is primarily the selenate form. Selenite is more toxic than selenate and is taken up more readily by organism."	Thomas R. Mongan	8/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Sources and Loadings of Parameters Section 4	Delete "acidic" from mine drainage discussion as the primary sources of mercury are not acid mine drainage. Add air deposition as a source of water quality parameters of concern. Possible wording: "air deposition that may contribute metals such as lead and mercury, pesticides such as diazinon, and other organics such as dioxin." The 3-dimensional graphic display are easy to read but could be misleading. The information in the matrix -format portion of each table shows the many areas where little or no data exists. On the graphic portion of the table however, these areas appear to have no contribution at all, when they could actually have a very significant contribution.	Jerry Troyan, *Sacramento Regional County Sanitation District*	8/13/97	Rick's Response - undated: Thank you for your consistent participating in the Water Quality Technical Group and for your comments on the Water Quality Program Component Report which as usual, are very helpful. We intend to adopt your suggestions wholesale, except we are still smuggling with the use of the 303(d) list. Your suggestion to use Basin Plan objectives and 304(a) criteria will receive careful consideration, and we may call on you to discuss this further, or otherwise help us reach closure on this issue. Your help and that of our other steady partners on the WQTG will certainly result in an improved CALFED water quality program.

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Topic	Comment	Person/ Organization	Date	Response
Sources and Loadings of Parameters of Concern Section 4	Table 4-2, Cadmium Loading: The inconsistency between the basin emission loading calculation and the total loads from the individual sources is several orders of magnitude. The report should contain a discussion of why this occurs or point out that this difference casts doubt on the loading calculations. The municipal, industrial and urban runoff loads for cadmium and other trace metals is based on data from 1985. Why did you select these data when there has been extensive testing of urban runoff for metals since about 1990 and there has been fairly extensive testing of metals in wastewater from the Sacramento Regional Wastewater Treatment Plant and possibly other wastewater treatment plants in recent years?	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Sources and Loadings of Parameters of Concern Section 4	Table 4-6, Selenium Loading: Loads of selenium from agricultural drainage in the San Joaquin Valley are not presented. The Grasslands Bypass Project has extensive information on concentrations and loads of selenium to the San Joaquin River. The data presented in the figure entitled "Selenium in the San Joaquin River Tributaries" for Salt/Mud Sloughs is outdated as a result of the Grasslands Bypass Project.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Sources and Loadings of Parameters of Concern Section 4	Table 4-8, Total Dissolved Solids Loadings: Appendix C refers to the Study of Drinking Water Quality in Delta Tributaries prepared by California Urban Water Agencies as the source of the loadings for agricultural drainage and municipal and industrial wastewater. The numbers presented in Table 4-8 could not be derived by reviewing the loading analysis presented in the CUWA report. In addition, the footnote notations in this table do not correspond to the correct footnotes in Appendix C.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.

Topic	Comment	Person/ Organization	Date	Response
Sources and Loadings of Parameters of Concern Section 4	Table 4-9, Total Organic Carbon Loading: Appendix C refers to the CUWA report and indicates agricultural drainage for the Sacramento Valley was calculated based on the loadings from Mud and Salt Sloughs. This is totally inappropriate because Mud and Salt Sloughs are in the San Joaquin Basin, not the Sacramento Basin. The CUWA report presents loadings for the Sacramento Basin based on Colusa Basin Drain and Sacramento Slough. These two agricultural drainage represent about 80 % of the total agricultural drainage to the Sacramento River. Using the appropriate data from the CUWA report, the correct estimate of TOC loading from the lower Sacramento Basin would be around 15 to 18 million lbs/year; not the 7.7 million lbs/year presented in the report. Similar miscalculations of organic carbon loading are made for the other sources in the watersheds.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Sources and Loadings of Parameters Section 4	Problem identification: Calculated total loads of compounds of concern: spikes are very important - lost.	Inge Werner, *Environmental Water Caucus*	10/28/97	
Sources and Loadings of Parameters Section 4	Section 4 on Sources and Loadings of Parameters is one of the most significant sections of the report. Table 4-1 indicates significant bromide loadings from the San Joaquin Basin. (It is hard to determine on my copy that this is from San Joaquin Basin or the Bay Region). It would be useful to identify the location, i.e, Vernalis.	Joseph McGahan, *Summers Engineering, Inc.*	11/13/97	
Sources and Loadings of Parameters Section 4	Selenium Loadings. It would be useful to identify where in the San Joaquin Basin this loading is calculated. I assume it is at Vernalis.	Joseph McGahan, *Summers Engineering, Inc.*	11/13/97	

Topic	Comment	Person/ Organization	Date	Response
Sources and Loadings of Parameters Section 4	Total Dissolved Solid Loadings. The table indicates that approximately one million tons (2 x 10^9 pounds) are discharged from the San Joaquin Basin. Again, the location would be useful. It is useful to compare the fact that the discharge from the Grassland Drainage Area in water year 1997 was approximately 150,000 tons and the discharge from Mud and Salt Slough was approximately 500,000 tons. Obviously, those are significant inputs but there are significant others also.	Joseph McGahan, *Summers Engineering, Inc.*	11/13/97	
Sources and Loadings of Parameters Section 4	In the section on estimated loadings of parameters of concern, CALFED may be attempting to do too much. Developing load estimates for pollutants discharged into large watersheds is a huge task and one that water quality control agencies have been struggling with for years as part of regulatory requirements to develop total maximum daily loads (TMDLs) for pollutants in impaired water bodies. CALFED's approach briefly outlined on pages 4-3 and 4-4 for developing "fairly complete load estimates" is a serious concern. The decision to try to develop load estimates utilizing limited data and fairly gross assumptions, and then use the load estimates to determine the relative importance of different sources of pollutants and the potential effectiveness of CALFED water quality actions could potentially lead to inappropriate decisions regarding water quality actions. In those cases where load estimates have been loosely put together using gross assumptions, we are concerned that the actual unknown parameter loading situation is being grossly misrepresented. It is very important that the CALFED Water Quality documents recognize those instances where water quality data are available and appropriate to use for developing load estimates, and differentiate them from those instances where sufficient data are not available and additional monitoring and assessment studies are warranted. We recommend that CALFED focus on utilizing available water quality data for parameters of concern and the best professional judgment of CALFED staff to make decisions regarding the relative importance of pollutant sources, the potential effectiveness of CALFED water quality actions, and the design of future monitoring programs, such as the Comprehensive Monitoring, Assessment and Research Program.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Sources and Loadings of Parameters of Concern Section 4	We are concerned with the use of the bar charts to present the parameter loading estimates. The bar charts highlight the parameter loads from sources with available data, and tend to minimize other sources of parameter loads where there are not sufficient data. Several of the parameter loading charts in Section 4 present a parameter loading picture which is biased toward the sources with sufficient monitoring data and minimizes the potential role of other sources with no apparent loading data. These include the charts prepared for bromide, mercury, nitrate, selenium and TOC. As an alternative, we recommend that CALFED either use pie charts to present loading data or simply present available data in loading tables as in Section 4. In those cases where CALFED has information regarding the total load of a parameter discharged to a particular subwatershed area, pie charts could be used to show the relative contributions of different basins and of different sources in a basin to the total load. The use of a pie chart would clearly illustrate the portion of the total load attributable to known sources and that portion attributable to unknown sources. In these cases where the total load for a particular parameter is not known, we recommend that the available data be presented in loading tables as in section 4 which clearly show the holes in the existing database.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Sources and Loadings of Parameters of Concern Section 4	Page 4-1: The listing of sources of water quality parameters of concern in the Delta and its tributaries should also include timber harvesting, road construction, dairies and confined animal facilities, and boat discharges. The "agricultural tail water or return flows" source should also include TOC.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Sources and Loadings of Parameters of Concern Section 4	Page 4-1: Under the heading "Sources of Parameters" there is a discussion of mine drainage but there is no discussion of the other sources of parameters. Either the mine drainage discussion is out of place or the information on other sources of contaminants was inadvertently deleted from the report.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Sources and Loadings of Parameters of Concern Section 4	Page 4-2: Loading of Parameters - This section should contain a discussion of each of the parameters, the sources, the loading calculations, the opinion of CALFED staff on the adequacy of the data used to estimate loads, and the opinion of CALFED staff on additional data needed to adequately characterize the loads. Although Section 3 of this report describes a number of ongoing monitoring programs, it appears that the data used in the loading calculations were limited to a few sources. The Central Valley Regional Water Quality Control Board report on loading in 1985 is cited throughout the supporting appendix describing the loading calculations. Data from more recent and more extensive monitoring programs would provide a much better analysis of loads. For example, data should be used from the Sacramento Coordinated Monitoring Program, the urban runoff monitoring programs of major Central Valley cities, and wastewater effluent monitoring programs.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Sources and Loadings of Parameters of Concern Section 4	Page 4-4: Background Loads - The report acknowledges the difficulties associated with not determining the background loads, particularly for trace elements, but then loads are presented with no footnote or explanation that acknowledges the problem.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Source and Loadings of Parameters of Concern Section 4	Table 4-1 through 4-10: The columns in these tables should be consistent and should match the order in which data are presented in the corresponding figures. For example, all tables and figures should be ordered form upstream to downstream. A map showing the boundaries of the subwatersheds would be useful to readers of this report.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

DRAFT
Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

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Sources and Loadings of Parameters of Concern Section 4	Table 4-1: Bromide Loadings - Seawater is the major source of bromide to the Delta but the loading of bromide from seawater is not calculated. This table and corresponding figure imply that the San Joaquin Basin is the major source of bromide. In reality, much of the bromide loading from the San Joaquin Basin is due to recirculation of bromide in export water that is used in the San Joaquin Basin and then discharged back into the San Joaquin River. In Appendix C the formula for calculating annual loads is presented as follows: average daily load x seconds per year = annual load The correct formula is: average daily load x days per year = annual load. Since the loading estimates presented in the main body of the report appear to be within an order of magnitude of the amount expected based on other sources, the formula was incorrectly type in the report.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Sources and Loadings of Parameters of Concern Section 4	Table 4-2: Cadmium Loading - The inconsistency between the basin emission loading calculation and the total loads from the individual sources is several orders of magnitude. The report should contain a discussion of why this occurs or point out that this difference casts doubt on the loading calculations. The municipal and industrial loads and the urban runoff loads for cadmium and other trace metals are based on data from 1985. Why did you select these data when there has been extensive testing of urban runoff for metals since about 1990 and there has been fairly extensive testing of metals in wastewater from the Sacramento Regional Wastewater Treatment Plant and possibly other wastewater treatment plants in recent years?	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

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Sources and Loadings of Parameters of Concern Section 4	Table 4-6: Selenium Loading - Loads of selenium from agricultural drainage in the San Joaquin Valley are not presented. The Grasslands Bypass Project has extensive information on concentrations and loads of selenium to the San Joaquin River. The data presented in the figure entitled "Selenium in the San Joaquin River Tributaries" for Salt/Mud Sloughs is outdated as a result of the Grasslands Bypass Project.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Sources and Loadings of Parameters of Concern Section 4	Table 4-8: Total Dissolved Solids Loadings - Appendix C refers to the Study of Drinking Water Quality in Delta Tributaries prepared by CUWA as the source of the loadings for agricultural drainage and M & I wastewater. The numbers presented in Table 4-8 could not be derived by reviewing the loading analysis presented in the CUWA report. In addition, footnote notations in this table do not correspond to the correct footnotes in Appendix C.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Sources and Loadings of Parameter of Concern Section 4	Table 4-9: Total Organic Carbon Loading - Appendix C refers to the CUWA report and says that agricultural drainage for the Sacramento Valley was calculated based on the loadings from Mud and Salt sloughs. This is totally inappropriate because Mud and Salt sloughs are in the San Joaquin Basin, not the Sacramento Basin. The CUWA report presents loadings for the Sacramento Basin based on Colusa Basin Drain and Sacramento Slough. These two agricultural drains represent about 80 % of the total agricultural drainage to the Sacramento River. Using the appropriate data from the CUWA report, the correct estimate of TOC loading from the lower Sacramento Basin would be around 15 to 18 million lbs./year; not the 7.7 million lbs./year presented in the report. Similar miscalculations of organic carbon loading are made for the other sources in the watersheds. Appendix C, footnote b (page C-16) also states that the CUWA report (Figure 401) shows that 4.75 % of the organic carbon load in the Sacramento River is from agriculture. This is incorrect. The figure shows that the contribution from Colusa Basin Drain and Sacramento Slough ranges from 8 to 15 %, depending upon the type of year and season. Appendix C, footnote D (page C-17) states that the CUWA report shows that 61.5% of the organic carbon load in the San Joaquin watershed is from agriculture. The CUWA report actually shows that about 43% of the load is from Mud and Salt sloughs. This same footnote refers to a monitoring program conducted by the Department of Pesticide Regulation between 1991 and 1993, although not data are presented. The DPR study did not include organic carbon monitoring.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Sources and Loadings of Parameters Section 4	In the section on estimated loadings of parameters of concern, CALFED may be attempting to do too much. Developing load estimates for pollutants discharged into large watersheds is a huge task and one that water quality control agencies have been struggling with for years as part of regulatory requirements to develop total maximum daily loads (TMDLs) for pollutants in impaired water bodies. CALFED's approach briefly outline on pages 4-3 and 4-4 for developing "fairly complete load estimates" is a serious concern. The decision to try to develop load estimates utilizing limited data and fairly gross assumptions, and then use the load estimates to determine the relative importance of different sources of pollutants and the potential effectiveness of CALFED water quality actions could potentially lead to inappropriate decisions regarding water quality actions. In those cases where load estimates have been loosely put together using gross assumptions, we are concerned that the actual unknown parameter loading situation is being grossly misrepresented. It is very important that the CALFED Water Quality documents recognize those instances where water quality data are available and appropriate to use for developing load estimates, and differentiate them from those instances where sufficient data are not available and additional monitoring and assessment studies are warranted. We recommend that CALFED focus on utilizing available water quality data for parameters of concern and the best professional judgment of CALFED staff to make decisions regarding the relative importance of pollutant sources, the potential effectiveness of CALFED water quality actions, and the design of future monitoring programs, such as the Comprehensive Monitoring, Assessment and Research Program.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Sources and Loadings of Parameters of Concern Section 4	We are concerned with the use of the bar charts to present the parameter loading estimates. The bar charts highlight the parameter loads from sources with available data, and tend to minimize other sources of parameter loads where there are not sufficient data. Several of the parameter loading charts in Section 4 present a parameter loading picture which is biased toward the sources with sufficient monitoring data and minimizes the potential role of other sources with no apparent loading data. These include the charts prepared for bromide, mercury, nitrate, selenium and TOC. As an alternative, we recommend that CALFED either use pie charts to present loading data or simply present available data in loading tables as in Section 4. In those cases where CALFED has information regarding the total load of a parameter discharged to a particular subwatershed area, pie charts could be used to show the relative contributions of different basins and of different sources in a basin to the total load. The use of a pie chart would clearly illustrate the portion of the total load attributable to known sources and that portion attributable to unknown sources. In these cases where the total load for a particular parameter is not known, we recommend that the available data be presented in loading tables as in section 4 which clearly show the holes in the existing database.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Sources and Loadings of Parameters of Concern Section 4	Page 4-1: The listing of sources of water quality parameters of concern in the Delta and its tributaries should also include timber harvesting, road construction, dairies and confined animal facilities, and boat discharges. The "agricultural tail water or return flows" source should also include TOC.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
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Water Quality Problem Areas Section 5	The first sentence of Section 5 states, "Defining what constitutes a 'problem' is a controversial and endlessly debatable issue." I strongly disagree. What constitutes a water quality problem is well defined. Namely, an impairment of use. This is not debatable, it is defined by law in the Clean Water Act.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Water Quality Problem Areas Section 5	With respect to the listing on the first page of Section 5, I have provided detailed comments on the appropriateness of a number of issues listed here. The discussion of what is meant by "impaired water bodies" relates to a Clean Water Act USEPA definition, not to one that would be understood or accepted by the public. Most of the California public is not concerned about the concentration of a chemical constituent that under worst case conditions in some water bodies, such as Lake Superior, could be adverse to the beneficial uses of lake water. The public is concerned about the impairment of the Delta waters and its resources. Delta waters are significantly different in their character and how they impact the water quality significance of chemical constituents than are Lake Superior waters.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Water Quality Problem Areas Section 5	Page 2, paragraph 3 states, "Both the lower American River and the lower Feather River are significantly impaired." The phrase should be similarly legally impaired. However, there is no evidence that the mercury, diazinon and chlorpyrifos in these waters are actually impairing uses of concern to people. The next sentence states, "Elevated mercury in these tributaries may pose a risk to people that catch and consume fish." The issue is not catching the fish, but consuming fish from these waters. The statement is made that "In these three water bodies, urban runoff has been identified as a source of mercury;" how significant is this? This statement can be highly misleading compared to the other sources. The fourth paragraph states, "These bioaccumulative substances impair recreation beneficial uses (i.e., fishing) in these areas," referring to PCBs and mercury. The issue is not fishing, but the consumption of the fish, with excessive concentrations of the constituents that are used as a food.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Water Quality Problem Areas Section 5	On page 5-2 under "San Joaquin River Basin," statements are made about the relative significance of diazinon or chlorpyrifos from ag versus urban. It is stated, "However, in this basin, urban runoff is not considered a major source of diazinon or chlorpyrifos." Considered by whom? A statement of that type has to be referenced and a discussion should be presented of the technical basis for such a statement. The statement is made in the next paragraph under "Delta," that "...diazinon and chlorpyrifos...impair environmental and recreational beneficial uses." That statement is not backed up by the information available. While diazinon and chlorpyrifos are present in the Delta, whether they impair the beneficial uses of the Delta is still unknown. Last paragraph, last sentence, states: "Urban runoff from cities around San Francisco Bay and San Pablo Bay is a significant source of metals to the estuary." No discussion is presented , however, of the fact that the RMP has been examining aquatic life toxicity in San Francisco Bay and found no aquatic life toxicity could be attributed to heavy metals, and for that matter, anything else except a few pesticides in the North Bay. To state that it is a source of metals, without discussing the data that is readily available from the San Francisco Estuary Institute on the significance of the metals is highly misleading and inappropriate for a CALFED publication.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Water Quality Problem Areas Section 5	The discussion of water quality problem areas is extremely cursory and weak. There are many references available from the State and Regional Boards and other sources that contain detailed descriptions of the many water quality problems in the Central Valley and the Delta. A fairly comprehensive reference is the Sanitary Survey of the State Water Project prepared for the State Water Contractors. Although the 303(d) list is a good starting point, there are many water quality problems that are not identified from that list (e.g., pathogens, organic carbon)	David Okita, *Solano County Water Agency*	10/8/97	

Topic	Comment	Person/ Organization	Date	Response
Water Quality Problem Areas Section 5	Page 5-1: The heading refers to Agricultural Drinking Water Targets. "Drinking" needs to be eliminated from this heading.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loadings section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Water Quality Problem Areas Section 5	The District is concerned with the reliance on the US EPA Section 303(a) listing which is based on old sampling data collected prior to implementation of proper QA/QC; is in the total recoverable rather than dissolved metals; and in comparison with criteria and guidelines which have not been legally adopted and therefore do not constitute water quality standards. This discussion should be qualified by pointing out that this list is based on old data and is in need of updating. A preferable approach is to compare existing water quality monitoring data collected using proper QA/QC with the water quality objectives contained in the Basin Plans and US EPA 304(a) criteria. The 304(a) criteria should be identified as recommended criteria that is subject to site-specific adjustment by the State and/or the Regional Boards.	Jerry Troyan, *Sacramento Regional County Sanitation District*	8/13/97	Rick's Response - undated: Thank you for your consistent participating in the Water Quality Technical Group and for your comments on the Water Quality Program Component Report which as usual, are very helpful. We intend to adopt your suggestions wholesale, except we are still smuggling with the use of the 303(d) list. Your suggestion to use Basin Plan objectives and 304(a) criteria will receive careful consideration, and we may call on you to discuss this further, or otherwise help us reach closure on this issue. Your help and that of our other steady partners on the WQTG will certainly result in an improved CALFED water quality program. *Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 24, 1997: Language identifying the criteria as recommended that is subject to site-specific adjustment by the State and/or the Regional Boards incorporated in the October 31, 1997, version of the Affected Environment document.
Water Quality Problem Areas Section 5	The upper and lower Sacramento Basin are defined differently in this section than in the previous section. For example, Section 4 Upper Sacramento Basin was defined as upstream of the dams whereas in Section 5 it is defined as Shasta Dam to Red Bluff. There should be consistency between the sections to avoid confusions.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated in the October 31, 1997, version of the Affected Environment document.

Topic	Comment	Person/ Organization	Date	Response
Water Quality Problem Areas Section 5	The text attributing water quality problems to various sources differs greatly from the material presented in Appendix D. In the text, many of the water quality problems are attributed to urban runoff, whereas in Appendix D mercury is attributed to mines and most pesticide problems are attributed to agriculture.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment noted.
Water Quality Problem Areas Section 5	The discussion of water quality problem areas is extremely cursory and weak. There are many references available from the State and Regional Boards and other sources that contain detailed descriptions of the many water quality problems in the Central Valley and the Delta. A fairly comprehensive reference is the Sanitary Survey of the State Water Project prepared for the State Water Contractors. Although the 303(d) list is a good starting point, there are many water quality problems that are not identified from that list (e.g., pathogens, organic carbon).	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
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Topic	Comment	Person/ Organization	Date	Response
Water Quality Problem Areas Section 5	Page 5-2: Novartis is not aware that the lower Sacramento River (Red Bluff to the Delta), the American River and the lower Feather Rivers are listed as "impaired" under Section 303(d) of the CWA for diazinon and chlorpyrifos. We would again have you refer to the ecological risk assessment. We would also disagree with the statement in the third paragraph that these products bioaccumulate and impair recreational fishing.	Dennis Kelly, *Novartis Crop Protection, Inc.*	10/3/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 28, 1997: Prepared follow-up response to Dennis Kelly to verify and forwarded to Rick Woodard for review. November 11, 1997: After review by Rick Woodard, incorporated changes and forwarded response to Dennis Kelly. PCB's and mercury bioaccumulate. In addition, the American River is not on the 303(d) list for chlorpyrifos and diazinon but the Feather and Sacramento Rivers are on the list.
Existing Programs Section 6	Page 6-1: It is stated that Penn Mine remediation should result in significant reduction. It will not result in significant reduction. The Regional Board/ EBMUD treatment has been removing 99.98% for years. The passive solution proposed will likely not do as well.	William Crooks, *City of Sacramento*	11/18/97	
Existing Programs Section 6	Page 6-1: The text refers to a document possibly being available in Spring 1997. The status of this document should be updated.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.
Existing Programs Section 6	Page 6-3: The CVRWQCB has not established an Inland Surface Waters Plan as stated in the text. The State Water Resources Control Board is responsible for developing and implementing the Inland Surface Waters Plan.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.
Existing Programs Section 6	Page 6-3: The text refers to a list of municipalities interviewed about their discharges. No list is provided in the document.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 24, 1997: Comment noted.

Topic	Comment	Person/ Organization	Date	Response
Existing Programs Section 6	Page 6-4: The section on pathogens should discuss *Cryptosporidium* and *Giardia* and mention that municipal dischargers are not currently required to monitor for these pathogens.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.
Existing Programs Section 6	Page 6-5: The Grasslands Bypass Project should be included in the list of on-going programs.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.
Existing Programs Section 6	Page 6-4: Sacramento Regional Waste Water Treatment Plant is not the only facility monitoring for diazinon and chlorpyrifos.	Dennis Kelly, *Novartis Crop Protection, Inc.*	10/3/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.
Existing Programs Section 6	Page 6-5: Novartis Crop Protection, Inc., (formerly Ciba Crop Protection), Dow Elanco and other have launched a massive, comprehensive "Best Management Practices (BMPs) for Dormant Sprays" education program. This education program has been aimed at growers, pest control advisors, consultants, and University of California farm advisors to reduce the amount of dormant spray runoff. The California Department of Pesticide Regulation has done considerable research (*Reducing Dormant Spray Runoff from Orchards* by L.J. Ross, K.P. Bennett, K.D. Kim, K. Hefner, and J. Hernandez - July 1997 and is available from the DPR). This research shows that the BMPs the industry is proposing will reduce the runoff from orchards. I have attached a copy of the education brochure. This program should be listed on page 6-5, along with the other stewardship programs.	Dennis Kelly, *Novartis Crop Protection, Inc.*	10/3/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.

Topic	Comment	Person/ Organization	Date	Response
Existing Programs Section 6	Pages 6-5, 6-6: The reference to the "Rice Herbicide Program" should be changed to reflect the correct name for that program -- the Rice Pesticide Program. The program was implemented by the Department of Pesticide Regulation in 1983 to control discharges of two rice herbicides, molinate and thiobencarb. In 1990, the program was expanded to include three rice insecticides, carbofuran, methyl parathion, and malathion. In 1991, the plan established performance goals for all five pesticides, under amendments to the Central Valley Region Water Quality Control Board's Basin Plan. Regional Board staff are currently in the process of amending the pesticide section of the Basin Plan to include defining numeric water quality objectives for the rices pesticides addressed in this program. (Source: 1996 Report on the Rice Pesticide Program, CDPR, 1-24-97).	Kati Buehler, *Northern California Water Association*	10/22/97	
Existing Programs Section 6	Page 6-5: The list of existing programs should include reference to the "Dormant Spray Management Practices" program, which is currently being developed by the Department of Pesticide Regulation and the dormant spray registrants. Good contacts for further information about this program would be Marshall Lee of DPR or Steve Murrill, Murrill & Assoc. Enclosed is a copy of the BMPs developed by this group.	Kati Buehler, *Northern California Water Association*	10/22/97	
Existing Programs Section 6	Agricultural Drainage. Listed are programs, practices and regulations that influence agricultural drainage water quality. I think a couple of additions would be the Grassland Bypass Project implemented by the San Luis and Delta-Mendota Water Authority and the Sacramento/San Joaquin River Basin Plan issued by the Central Valley Regional Water Quality Control Board.	Joseph McGahan, *Summers Engineering Inc.*	11/13/97	
Existing Programs Section 6	Page 6-1: The text refers to a document possibly being available in spring 1997. The status of this document should be updated.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Existing Programs Section 6	Page 6-2: In the first paragraph under the Urban Runoff heading, the correct Clean Water Act citation is "(33 U.S.C. Section 1342(p)."	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Existing Programs Section 6	Page 6-3: In the first paragraph the following statement is made: "It is unlikely that programs that emphasize source controls and elimination of illicit connections will substantially reduce existing urban runoff pollutant loads." Is this statement true or a matter of opinion? If the statement has some factual basis, we suggest that CALFED provide appropriate references. If the statement is a matter of opinion, we suggest that it be deleted.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Existing Programs Section 6	The Central Valley Regional Water Quality Control Board is responsible for preparation and adoption of the Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan), and the periodic review and revision of the Basin Plan. The Basin Plan consists of the designation of beneficial uses for all water bodies covered under the Basin Plan, water quality objectives to protect those uses, and a program of implementation needed for achieving the water quality objectives. Municipal and industrial point source discharges to surface waters are generally controlled through National Pollutant Discharge Elimination System (NPDES) permits. Although the NPDES program was established under the federal Clean Water Act, the NPDES permits are prepared and enforced by the Regional Board, according to California's authority under the Clean Water Act.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Existing Programs Section 6	Page 6-3: CALFED needs to provide a brief description of the Coast Guard's program to regulate and control wastewater discharges from boats. The Coast Guard is mentioned, but not details are provided on page 603.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

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Topic	Comment	Person/ Organization	Date	Response
Existing Programs Section 6	Page 6-3: The Central Valley Regional Water Quality Control Board has not established an Inland Surface Waters Plan, as stated in the text. The State Water Resources Control Board is responsible for developing and implementing the Inland Surface Waters Plan.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Existing Programs Section 6	Page 6-3: The text refers to a list of municipalities interviewed about their discharges. No list is provided in the document.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Existing Programs Section 6	Page 6-4: The section on pathogens should discuss *Cryptosporidium* and *Giardia* and mention that municipal dischargers are not currently required to monitor for these pathogens.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

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Topic	Comment	Person/ Organization	Date	Response
Existing Programs Section 6	Page 6-5: The following two programs should be included in the list of agricultural drainage programs: Dormant Spray Water Quality Program: California Department of Pesticide Regulation; contact person at DPR is Marshall Lee. The purpose of the Dormant Spray Water Quality Program is to prevent aquatic toxicity from organophosphate pesticide residues (e.g., diazinon and chlorpyrifos) in the Sacramento and San Joaquin rivers. Initially, DPR is focusing on promoting voluntary efforts by growers to reduce the movement of these pesticides to surface waters to prevent aquatic toxicity. The program includes monitoring by DPR to evaluate the effectiveness of the program. Environmental Quality Incentives Program: Natural Resource Conservation Service, USDA. The Environmental Quality Incentives Program (EQIP), authorized under the 1996 Farm Bill, is a voluntary program which provides incentive payments and cost sharing, technical assistance and education assistance to farmers and rancher for the implementation of structural and land management practices that address natural resource problems, including areas where agricultural improvements will help meet water quality objectives. In California, the resources of the Bay-Delta and many counties in the Bay-delta watershed have been identified as priority areas for EQIP funding. The types of conservation practices that are funded through this program include manure management systems, pest management and erosion control. Another program that needs to be briefly discussed in Section 6 is the Central Valley RWQCB's effort to develop a San Joaquin River Basin Plan amendment addressing salinity and boron. The purpose of the Basin Plan amendment process is t define and quantify the extent of the problem and establish a program to improve salinity and boron water quality in the Lower San Joaquin River at Vernalis and upstream reaches.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	

Topic	Comment	Person/ Organization	Date	Response
Existing Programs Section 6	Page 6-5: The Grasslands Bypass Project should be included in the list of ongoing programs.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Existing Programs Section 6	Page 6-5 and 6-6: The reference to the "Rice Herbicide Program" should be changed to reflect the correct name for that program - the Rice Pesticide Program. The program implemented by the Department of Pesticide Regulation in 1983 to control discharges of two rice herbicides, molinate and thiobencarb. In 1990, the program was expanded to include three rice insecticides, carbofuran, methyl parathion, and malathion. In 1991, the plan established performance goals for all five pesticides, under amendments to the Central Valley Regional Water Quality Control Board's Basin Plan. Regional Board staff are currently in the process of amending the pesticide section of the Basin Plan to include defining numeric water quality objectives for the rice pesticides addressed in this program.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Existing Programs Section 6	There are several references to the "Supplemental Information Section," however, it is not provided in the report.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Existing Programs Section 6 Agricultural Drainage	Rewrite the Rice Herbicide Program as the following: The Rice Pesticide Program, was initiated by the California Department of Regulation in 1984 to address concerns about rice herbicides in surface water. However, other rice pesticides were included in the program after 1984. Carbofuran is a rice pesticide and is among the parameters of concern. The Program included establishment of rice pesticide performance goals for surface waters. Holding times for rice irrigation water after pesticide application are specified, and the rice industry installed a variety of innovative irrigation return flow control system. Resulting reductions in rice pesticide concentrations were dramatic, and generally in compliance with increasingly stringent performance goals. The program, context, and results are described in the Supplemental Information section.	John Sanders, *DPR*	8/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.

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Topic	Comment	Person/ Organization	Date	Response
Existing Programs Section 6 Agricultural Drainage	Page 6-5: Add the "California Pesticide Management Plan for Water Quality" under the existing programs. The text is included in original comment. Attached is a Fact Sheet entitled Dormant Sprays and Water Quality which should also be added to the existing programs.	John Sanders, *DPR*	8/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.
Actions Strategies Section 7	Pages 7-2 and 7-3 should recognize the existing dormant spray BMP program. On urban issues, Novartis has actively pursued the label changes and warnings on our urban used diazinon to warn consumers to stop disposing of excess product down the drains and is working with the Urban Pesticide Committee to reduce the runoff and inappropriate disposal of our products.	Dennis Kelly, *Novartis Crop Protection, Inc.*	10/3/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: This program will be noted as part of the existing water quality programs in the region in the Water Quality Technical Report to the Programmatic EIR/EIS during the next set of revisions.
Action Strategies Section 7	Page 7-5: "Indicators of Success," is presented as achieving the USEPA 304(a) guidelines for mercury in the Delta and its tributaries. This is not an appropriate objective. The objective should be in the second point mentioned, "Removal of fish health advisories." This is an appropriate indicator of success.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Action Strategies Section 7	Actions promoted by CALFED include toxicity testing of Delta/River water using the three-species toxicity bioassay. This is presently the best choice for determining toxicity of bioavailable pollutants. CALFED should also support bioassay using resident, native species.	Inge Werner, *UC Davis*	8/15/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* Rick's Response - 8/18/97: I agree CALFED should support development of bioassays using resident species, in addition to the standard three species test. 11/21/97: Toxicity tests involving native test organisms are included as performance measures of several actions in the Water Quality Program Plan.
Action Strategies Section 7	We are pleased to see that many of the comments of NBA Contractors and the Ag/Urban Policy Group were incorporated into this document.	David Okita, *Solano County Water Agency*	10/8/97	

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Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7	We are pleased to see that many of the comments of the Ag/Urban Policy Group were incorporated into this document; however, areas where Ag/Urban comments on action strategies were not incorporated into the document are: 5- Mine drainage 6- Reduce the toxic effects of copper, zinc and cadmium loadings from urban runoff 7- Reduce toxic effects of nutrient loadings and oxygen depletion through source control of urban runoff 8- Reduce toxic impacts of copper and mercury loadings from wastewater discharges to Suisun Bay and Carquinez Straight 9- Reduce selenium loadings to Delta through control of industrial discharges to Suisun Bay and Carquinez Straight 10- Reduce salinity impacts through source control and treatment of agricultural surface and subsurface drainage in San Joaquin basin; specifically comments on evaporation ponds and reduced salinity loads as a performance measure 11- Reduce salinity for agricultural source water through improved outflow patterns and water circulation in the Delta We would like to discuss these suggested action strategies with you because we believe they will strengthen the CALFED Water Quality Common Program.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Comments incorporated into Water Quality Program Plan.
Action Strategies - Addition	There are gaps in the report with regard to significant water quality impacts and beneficial uses which have been overlooked and under evaluated. **Silvicultural Operations** are a major source of sediment loading in upper watersheds. CALFED should consider modifications to Timber Harvest Permits and other controls (buffers, cutting limits, harvest practices, revegetation) to protect source water in logging areas.	Marguerite Young, *Clean Water Action*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Turbidity and sediments caused by timber harvesting and logging in the upper watersheds is addressed in the Water Quality Program under actions for agriculture which are specifically targeted at turbidity and its affects on juvenile salmon.

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Topic	Comment	Person/ Organization	Date	Response
Action Strategies-Addition	There are gaps in the report with regard to significant water quality impacts and beneficial uses which have been overlooked and under evaluated. The impact of contamination of fish by pathogens, metals and pesticides is seriously undervalued in this report by the assumptions that fish are consumed only by recreational fishers. There is a considerable amount of **subsistence fishing in delta waters.** Subsistence anglers eat as much as a pound of fish/shellfish per day, considerably higher than the 1/7 lb per day standard used for recreational fishing. **Bioaccumulation of toxics** is inadequately addressed even though this problem is well documented (e.g., mercury). The WQP needs to have actions strategies to address this issue.	Marguerite Young, *Clean Water Action*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: The Water Quality Program has identified several actions to address bioaccumulative substances such as mercury and selenium. Water Quality targets for these substances have been identified for tissue based on the known bioaccumulative nature of these substances. A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.
Action Strategies Section 7 Mine Drainage	Page 7-3 discusses mine drainage with respect to mercury, cadmium, copper and zinc, yet, earlier in the document mention was made of chromium associated with mine drainage. It has not been carried through; is chromium a problem or not? The same problems exist with respect to urban and industrial runoff from the Sacramento Basin in controlling toxicity associated with chlorpyrifos and diazinon. Where is the problem? There is toxicity but does it affect anything of concern to people?	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Action Strategies Section 7 Mine Drainage	Page 7-4, "Mine Drainage," again mentions reduction of copper loadings from 65,000 to 10,000 pounds. Again, no reference is given to the validity of this approach, in as it may affect water quality. The Indicators of Success in this same section, are presented as achieving the Basin Plan objectives for copper, zinc and cadmium. Where is the water quality problem that shows that these chemicals are adversely impacting the Delta or its resources?	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Action Strategies Section 7 Mine Drainage	Page 7-4: The performance measure to reduce toxic effects of cadmium, copper and zinc is planned to be measured as a reduction in annual copper loadings. How do (if so) correlate cadmium and zinc loadings to copper loadings? Wouldn't it be better to monitor for all three compounds of concern?	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: All of these compounds will be identified in the performance measures, where appropriate.

Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7 Mine Drainage	Page 7-4: The copper loading numbers given in the first performance measure under mine drainage do not agree with the copper loading estimates given in Table 4-3.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: The loadings estimates have been removed from the discussion of the actions to avoid conflicts with the Sources and Loadings section of the Water Quality Technical Report to the draft Programmatic EIR/EIS.
Action Strategies Section 7 Urban and Industrial Runoff	Farm runoff could be a significant source of pathogens such as *Cryptosporidium* and should be included in the section under Urban and Industrial Runoff or listed as a separate category.	Richard A. Denton, *Contra Costa Water District*	8/15/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Comment incorporated into the WQPP.
Action Strategies Section 7 Urban and Industrial Runoff	Page 7-2, "Delta" third paragraph states "Urban and industrial runoff actions will help to reduce toxicity from the pesticides chlorpyrifos and diazinon, copper, and oxygen depletion in the Delta, and to reduce pathogens." Until such time as the significant of the limited scope toxicity due to diazinon and chlorpyrifos to only certain type of zooplankton organisms, is understood, it is inappropriate to conclude that reducing the toxicity due to these chemicals in urban runoff will have any impact on the beneficial uses of the Delta and its tributaries. Further, the statement about copper toxicity for urban and industrial runoff appears to be without technical validity, unless some specific industry has been found to be discharging available forms of copper, which are highly toxic in the Delta.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7 Urban and Industrial Runoff	Page 7-5, "Urban and Industrial Runoff," the Action is stated as "Reduce toxic effects of copper, zinc and cadmium loadings to the Delta and its tributaries from urban and industrial runoff." Where is there evidence that there is significant toxicity that affects water quality/beneficial uses due to copper, zinc and cadmium from urban stormwater runoff? While CALFED proposes to focus control programs on achieving heavy metal concentrations in waters impacted by stormwater runoff that are equal to or less than the USEPA water quality criteria, CALFED states here that the purpose of the program is to reduce toxic effects of copper, etc. Since toxic effects cannot e judged by chemical concentrations, achieving the so-called "Action" item for urban and industrial runoff mandates that toxicity be the primary parameter of concern, not chemical concentrations.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Action Strategies Section 7 Urban and Industrial Runoff	Page 7-5, in the section titled "Performance Measures," the "Reduction in copper loadings at selected stormwater monitoring stations," can readily result in massive waste of public funds, unless the copper that is being reduced is, in fact, in a toxic form. The large amounts of data from San Francisco Bay show that the copper in urban runoff is non-toxic.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7 Urban and Industrial Runoff	What are the existing source control regulations? How is enforcement going to be improved? What are the incentives for additional source control of urban and industrial runoff? This section addresses 3 heavy metals (Cu, Cd, Zn) and only 2 pesticides (chlorpyrifos, diazinon) as primary chemical pollutants of concern. Whereas action should certainly betaken concerning the above compounds, loading and effects of other chemicals such as the gasoline additive MTBE, unburned gasoline from 2-stroke engines and many additional pesticides commonly applied in urban areas (e.g., by Caltrans) must be investigated and addressed. Besides education and incentives, emphasis should be put on programs to promote sales restriction on pesticides (e.g., diazinon), promote regulations to make car and engine manufacturers terminate production and sale of 2-stroke engines, restrict usage of e.g. copper in brake pads, and encourage use of more energy efficient cars (e.g., higher registration fees for strong polluters and/or more powerful cars like in some European countries). In addition to source control to reduce turbidity in the Delta and its tributaries, action strategies should include creation and restoration of riparian corridors, wetlands and other buffer zones. Not only will these reduce runoff and sediment loading but they will also improve source water quality for urban water users.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Requests for additions and/or deletions to the Water Quality Program may be presented to the Parameter Assessment Team at the next meeting on January 28, 1998. After presenting scientific evidence regarding your request, the Parameter Assessment Team will decide whether to add or delete the requested parameter of concern. The Parameter Assessment Team will forward that recommendation to the Water Quality Technical Group which, in turn, will take the addition/deletion into consideration and make a recommendation to the CALFED Bay-Delta Program. Wetland creation is included as a strategy to treat wastewater. Creation and restoration of riparian corridors, wetlands, and other buffer zones is included as part of actions in the WQPP. 1/14/98: Ms. Werner forwarded information regarding the addition of MTBE and asked that it be provided to the Parameter Assessment Team on January 28, 1998. 1/28/98: The Parameter Assessment Team reviewed the information provided regarding the addition of MTBE to the CALFED Water Quality Program parameters of concern and recommended that MTBE be placed on a "Potential Parameters of Concern" list.
Action Strategies Section 7 Urban and Industrial Runoff	Logging activity in the upper watersheds has not been addressed. Road construction by logging companies and deforestation contribute considerably to siltation and increased turbidity in creeks and rivers. A healthy upper watershed is indispensable for a healthy ecosystem.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Turbidity and sedimentation associated with timber harvesting and logging in upper watersheds is addressed in the WQPP under actions for agriculture which are specifically targeted at turbidity and its effects on juvenile salmon.

Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7 Urban and Industrial Runoff	Page 7-5, "Action" states "Reduce toxicity from the pesticides chlorpyrifos and diazinon in the Delta and its tributaries through source control of urban and industrial runoff." First, what evidence is there that industrial runoff contains chlorpyrifos and diazinon?	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Action Strategies Section 7 Urban and Industrial Runoff	Page 7-6, "Performance Measure," states "Improved understanding of the toxicity and sources and mechanisms or chlorpyrifos and diazinon transport into the Delta." Is there a real water quality use impairment due to these chemicals in the Delta, due to urban stormwater runoff? It appears to me that this is highly unlikely. The problem due to these chemical is agricultural runoff and atmospheric transport. Why specify the same performance measure the three-species test? And why focus on improved survivability in this test and not chronic toxicity? Under "Indicator of Success," it states "Reduced toxicity from chlorpyrifos and diazinon in the Delta and its tributaries." This is a misdirected effort. The effort should be reduced toxicity due to these chemicals that significantly impair the designated beneficial uses of the Delta and its tributaries.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	
Action Strategies Section Urban and Industrial Runoff	Page 7-6, "Action" states "Reduce the toxic effects of nutrient loadings and consequently, oxygen depletion in the Delta and its tributaries through source control of urban and industrial runoff." What evidence is there that there are toxic effects of nutrient loadings that are impairing Delta water quality and its aquatic resources? Is it toxicity due to oxygen depletion? This appears to be a very limited problem near Stockton, in some dead end sloughs. Is CALFED going to apply this to the City of Sacramento to reduce the nutrient loads to this city's stormwater runoff? The same kinds of problems exist for wastewater and industrial discharges, AG pesticides, drinking water, etc.	G. Fred Lee, *G. Fred Lee & Associates*	8/15/97	

Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7 Wastewater and Industrial Discharges	There are gaps in the report with regard to significant water quality impacts and beneficial uses which have been overlooked and under evaluated. The impacts of **agricultural wastewater entering the California Aqueduct,** via drain inlets in the San Luis Canal, not addressed (1995 DWR Water Quality Assessment of Floodwater Inflows in the San Luis Canal) as a drinking water quality issue. Surely these sources of salts, metals, and organic compounds have a significant impact on water quality for Southern California users.	Marguerite Young, *Clean Water Action*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Water quality actions to address agricultural drainage are focused on waters of the Delta Region and waters flowing into the Delta Region.
Action Strategies Section 7 Wastewater and Industrial Discharges	Boats in the Delta and major tributaries no only discharge sewage into the waterways, but also contribute considerably to chemical pollution through their two-stroke engines. The two-stroke outboard motor, found on most boats and personal watercraft (such as jet skis) is one of America's largest source of toxic pollution. Twenty-five percent of all the fuel and oil that these motors use is emitted unburned. The USEPA estimates that three hours of operation by a 70-horsepower two-stroke outboard motor at cruising speed will discharge one quart of unburned oil into the water. One quart of oil dumped into 250,000 gallons of water causes 50% mortality in Dungeness crab larvae (CA Dept of Fish and Game). Almost no toxicologic information is available on the gasoline additive MTBE, which is being detected in most California water bodies. Production and sale of two-stroke engines should be restricted.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Fuel, oil, gasoline and MTBE have not been identified as parameters of concern by the Water Quality Technical Group. On January 28, 1998, the Parameter Assessment Team will consider whether to recommend fuel, oil, gasoline and MTBE should be added to the list. If these pollutants are added to the list, actions will be formulated to address them.

Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7 Wastewater and Industrial Discharges	How will enforcement of boat domestic waste discharge regulations be improved? Are industrial plants required to declare the constituents in their wastewater? This information is accessible to CALFED, and included as part of the report. Selenium is the only compound CALFED addresses concerning industrial discharges to the lower Delta/upper San Francisco Bay area. Other compounds of concern need to be identified and their toxicological impact(s) evaluated.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: The specific mechanisms for implementing actions will be addressed in the Water Quality Implementation Plan. Industrial dischargers are required to obtain an NPDES permit for their discharge in accordance with state and federal law. The program has developed actions to address water quality problems associated with pollutants identified as parameters of concern by the Water Quality Technical Group. Once a pollutant is identified as a parameter of concern, actions will be developed to address it.
Action Strategies Section 7 Wastewater and Industrial Discharges	Chemical plants? Methamphetamine labs on delta (hazardous waste)? Improve existing bioassay protocols and develop bioassays (besides USEPA three species test) using resident species to assess toxicity of treatment plant effluents and Delta waters. Priority should be given to use sensitive species and/or lifestages as bioassay organisms. More emphasis should be placed on sublethal effects in organisms. Sediment toxicity in the Delta should be assessed using existing standard sediment bioassays.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Specific tools for assessing the effectiveness of actions are currently being reviewed by the Water Quality Technical Group. The specific tools and mechanisms for implementation of each action will be identified in Phase III of CALFED. Toxicity tests involving native and laboratory species are part of the performance measures and indicators of success of many actions.

Topic	Comment	Person/ Organization	Date	Response
Action Strategies-Wastewater and Industrial Discharges	There are gaps in the report with regard to significant water quality impacts and beneficial uses which have been overlooked and under evaluated. •**Recreational boating** degrades water quality by contributing significant quantities of sewage, motor oil and MTBE especially from 2-stroke engines. • Exposure to **pathogens associated with contact recreation** in the delta is not adequately documented or evaluated. •**Industrial discharges** are not enumerated or discussed thoroughly for potential wastewater impacts. Also included here should be an analysis of "spill hazards" by commercial vessels moving up the delta to Sacramento and Stockton.	Marguerite Young, *Clean Water Action*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Requests for additions or deletion of parameters of concern in the Water Quality Program may be presented to the Parameter Assessment Team. The Parameter Assessment Team recommends additions or deletions to the Water Quality Technical Group which, in turn, makes recommendations to the CALFED Bay-Delta Program. An action to address recreational uses and pathogens is included in the program but we could benefit from further stakeholder input on how to improve this action. Several water quality actions address industrial discharges. A complete analysis of problems and the specific implementation mechanisms for actions will be included in the Water Quality Implementation Plan.
Action Strategies Section 7 Agricultural Drainage	Page 7-3: San Joaquin Basin. The first statement of the paragraph indicates that the drainage discharged to the San Joaquin River from the Grasslands areas are perhaps the "most significant" cause of water quality problems (quote added). I think probably as I mentioned above there are other discharges especially related to salinity. Possibly it would be more accurate to eliminate the word "most" or change the wording so that one does not think that all of the salinity, in particular at Vernalis, is created in the Grassland Area.	Joseph McGahan, *Summers Engineering Inc.*	11/13/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.
Action Strategies Section 7 Agricultural Drainage	Page 7-9: The action reads reduce the "toxic" effects of selenium loadings to the lower San Joaquin River. Certainly at certain concentrations selenium is toxic but it is not at all clear that the current loadings to the Lower San Joaquin River cause "toxic" concentrations.	Joseph McGahan, *Summers Engineering Inc.*	11/13/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Toxic effects of selenium may be acute or chronic. Selenium is bioaccumulative so exposure to low levels over a long period may be chronically toxic to some organisms.

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Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7 Agricultural Drainage	Selenium is present in the environment in various forms (selenite, selenate), which differ in their toxicity to aquatic organisms, and their effects are potentially additive. This should be taken into consideration when selenium is monitored in tissues of aquatic organisms. Selection of the organism is important: fish move around and are therefore less indicative for pollution at one particulate site than e.g., molluscs, whereas molluscs may bioaccumulate differently. In addition, metals and toxic elements bioaccumulate in biological tissues and biomagnify in the food chain. Accumulation of compounds of concern and pathogens in fish poses danger to subsistence and recreation fishers.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Like mercury, selenium is toxic in various forms. Toxicity tests associated with selenium will test for the various forms of selenium.
Action Strategies Section 7 Agricultural Drainage	Agricultural drainage and runoff contains hundreds of pesticides applied within the CALFED problem and solution areas. CALFED addresses only 3 in its action strategies; these three have already been studied and their toxicity is known. Naturally, this opens the door for intensive monitoring and attempts to reduce their input into the system. It should, however, not be neglected to identify other pesticides of concern and investigate their effects on the environment. In 1992, for example, 2.7 million pounds of the fungicides ziram and maneb were applied to agricultural fields in California alone (CalEPA, 1992).	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Water quality actions address parameters of concern identified by the Water Quality Technical Group. Before an action can be directed at a pollutant, it must first be added to the water quality parameters of concern list. The list of parameters of concern may be updated periodically to reflect new knowledge. On January 28, the Parameter Assessment Team will meet to discuss the possibility of adding ziram as a parameter of concern.
Action Strategies Section 7 Agricultural Drainage	Selecting crops according to climatic (water use) and soil conditions could reduce the number and quantities of pesticides used. Dairy and feedlot management is of major importance: 60 % of the dairy farms in the San Joaquin Valley are out of compliance (7/20 SF Chronicle). They constitute a significant source of pathogens and nutrients. Better enforcement of current laws and enclosing the loopholes for these sources is crucial.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: The program has developed actions to address pathogens and nutrients from agricultural lands. These actions include better enforcement of regulations.

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Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7 Water Treatment Actions	Why has CALFED singled out drinking water quality standards as the only area where the CALFED solution will address future standards. We are strong advocates of safe drinking water and strict health protective standards but our understanding is that USEPA's rulemaking process for microbial contaminants and disinfection byproducts under the 1996 amendments to the SDWA is still in the early stages. We also understand that the rule will be made after considerable research (yet to be done) both in the development of treatment technologies and in source control measures and source water protection improvements. The WQP implies that these future standards cannot be met without the relocation of intakes and their attendant conveyance facilities. At minimum, this is premature speculation, at worst it is driving a common program which is to bridge all alternatives toward a single outcome. Such a path clearly overlooks what could be more cost effective means of achieving better drinking water quality. Additionally, some of the performance targets listed appear to be more stringent than is likely under the Stage 1 D/DBP rule and should be lowered. Hence, the ability of delta water to meet these more likely standards should be reassessed.	Marguerite Young, *Clean Water Action*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: The relocation of drinking water intakes is included as one method for improving total organic carbon, pathogens, turbidity and bromides at domestic water supply intakes. The plan also identified another method - reduction of Delta island discharges high in total organic carbon, pathogens and turbidity. A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.
Action Strategies Section 7 Water Treatment	Performance measures should be based on CURRENT standards not future standards.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: In general, performance measures are based on current standards. However, in accordance with the CALFED adaptive management policy, water quality actions should remain flexible to possible future changes.
Action Strategies Section 7 Water Treatment	Relocation of water supply intakes is a storage and conveyance issue, represented by several of the CALFED alternatives. It has no place in such a common program.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Relocation of water supply intakes has been suggested by Water Quality Technical Group stakeholders and can therefore not be dismissed out of hand.

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Comments from Stakeholders
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Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7 Agricultural Drainage	Page 7-2: Agricultural drainage actions for the Delta should also include methods to reduce the loading of TOC from the Delta islands.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Comment incorporated into the WQPP.
Action Strategies Section 7 Agricultural Drainage	Page 7-3: For the Sacramento and San Joaquin basins, pathogens should be included as a parameter to be addressed through agricultural drainage actions, since there are dairies and rangelands in both basins, which can be sources of pathogens.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Comment incorporated into the WQPP.
Action Strategies Section 7 Agricultural Drainage	Page 7-11: For the action addressing sediment loading, add the word "turbidity" after the word "subsequent."	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Comment no longer relevant to the information contained in the WQPP.
Action Strategies Section 7 Water Treatment	Problem compounds should be reduced to a minimum by source control measures.	Inge Werner *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Source control measures have been identified, where possible, in the WQPP.
Action Strategies Section 7 Water Treatment	Cost calculation of alternative disinfection treatment methods should be included.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Comment incorporated into the WQPP.

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Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7 Water Treatment	USEPA regulations for disinfection byproducts (DBPs) have not been worked out yet. Future standards should be met by future treatment technologies and source protection measures!	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Comment noted.
Action Strategies Section 7 Water Treatment	The timing of water withdrawals (low tide) can be important to avoid water quality problems such as increased salinity and high concentrations of bromide. With a concurrent reduction of salts in agricultural drainage the problem compounds could be reduced to a minimum.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Timing of agricultural drainage is included as a method for agricultural drainage actions.
Action Strategies Section 7 Water Treatment	Water conservation measures, crop selection and other measures should also be included here which will increase potential freshwater flow into the Estuary. Apart from beneficial effects such as a reduction in agricultural drainage water this will potentially result in a reduction of seawater intrusion. It is difficult to determine a "healthy" limit for seawater intrusion since historic levels were much higher and have been evened out by water management practices, aimed at keeping salinity at the pump to a minimum. (Ag drainage into California Aqueduct 1995 DWR report).	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: The program has developed water management actions to address salinity and water circulation in the Delta.
Action Strategies Section 7 Water Treatment	What about selected treatment of agricultural wastewater from in delta farms near intakes to improve water quality?	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Treatment of agricultural drainage is a method under consideration. The specific mechanisms for implementation of actions will be further developed as part of Phase III of CALFED.

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Comments from Stakeholders
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Topic	Comment	Person/ Organization	Date	Response
Action Strategies Section 7 Water Treatment	We strongly encourage CALFED to employ some kind of systematic ranking scheme to assess the most important water quality issues. If this is the idea behind the Action strategies section, then the supply intakes to areas that are not influenced by those discharges implying a mandate for an isolated facility with an upstream intake! Since this method is only considered in some of the alternatives, by definition its not a "common program". Further, this method is inconsistent with the overall CALFED approach of balancing multiple goals by advancing source replacement with sacrificing ambient water quality in the delta and ignoring the potential of source water protection measures. There are other methods (some even listed in the two action items which precede this one) for controlling these contaminants such as increasing freshwater inflows, treating in-delta ag wastewater near to the pumps, better source control for pathogens (from grazing, feedlots and dairies), and the creation of natural pollutant filtration systems (wetlands, meander corridors, and forested areas along streams throughout the watershed). These should be more prevalent in the action strategies.	Marguerite Young, *Clean Water Action*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.
Action Strategies Section 7 Water Management	Urban and agricultural water conservation should be given high priority. Incentives are good, especially if the price for water is adjusted to more realistic levels (i.e., higher). See comments provided to CALFED on Water Use Efficiency program).	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities.
Action Strategies Section 7 Unknown Toxicity	For determination of criteria for water quality parameters of concern, CALFED target ranges should distinguish between freshwater and saltwater (ro rather brackish water), since many compounds form complexes in saltwater that are less bioavailable.	Inge Werner, *Environmental Water Caucus*	10/28/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Water quality target levels have been based on USEPA objectives, Basin Plan objectives, and other applicable criteria. These criteria have freshwater and saltwater values that have been used, where appropriate.

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Topic	Comment	Person/ Organization	Date	Response
Watershed Coordination Section 8	Pages 8-1 and 8-2: The correct name for the program on the fourth line of the last paragraph is the Sacramento River Toxic Pollutant Control Program.	Jerry Troyan, *Sacramento Regional County Sanitation District*	8/13/97	Rick's Response - undated: Thank you for your consistent participating in the Water Quality Technical Group and for your comments on the Water Quality Program Component Report which as usual, are very helpful. We intend to adopt your suggestions wholesale, except we are still struggling with the use of the 303(d) list. Your suggestion to use Basin Plan objectives and 304(a) criteria will receive careful consideration, and we may call on you to discuss this further, or otherwise help us reach closure on this issue. Your help and that of our other steady partners on the WQTG will certainly result in an improved CALFED water quality program.
Appendix B	The water quality data summary tables at the beginning if Appendix B would be much more useful is the data tables included information regarding the extent and frequency of monitoring (i.e., was the monitoring done on a daily, weekly, monthly, or annual basis, on a seasonal basis, or one time only as part of a short term study?). The compiled water quality data for each parameter in the middle of Appendix B do not take into account the frequency of monitoring, the time of year or the conditions under which monitoring was done at each location. Without this type of information it is very difficult to interpret the monitoring results, and the mean values that are calculated and provided in the tables are also not useful. Knowledge of the extent and frequency of monitoring data is critical in order to understand the observed levels of water quality parameters, especially for those parameters that are only observed and/or monitored seasonally or only during peak runoff events.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	11/7/97	
Appendix B	The reliability of the extremely high maximum value of 290 allegedly found by USGS at Freeport Marina should be carefully checked. If this is an outlier, it probably distorts the average value reported, and the median value would be a more reasonable representation of the central tendency of the results.	Thomas R. Mongan	8/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: Comment incorporated into October 31, 1997, version of Affected Environment document.

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Topic	Comment	Person/ Organization	Date	Response
Appendix C	The copy reviewed was missing pages C-3 to C-6, C-11 to C-13, C-18 to C-33, and C-35 to C-38.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 24, 1997: Comment noted.
Appendix C	Page C-16, footnote b: states that the CUWA report (Figure 4-1) shows that 4.75% of the organic carbon load in the Sacramento River is from agriculture. This is incorrect. The figure shows that the contribution from Colusa Basin Drain and Sacramento Slough ranges from 8 to 15%, depending upon the type of year and season. Footnote d states that the CUWA report shows that 61.5% of the organic carbon load in the San Joaquin watershed is from agriculture. The CUWA report actually shows that about 43% of the load is from Mud and Salt Sloughs. This same footnote refers to a monitoring program conducted by the Department of Pesticide Regulation between 1991 and 1993, although no data are presented. The DPR study did not include organic carbon monitoring.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loading section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Appendix C	The formula for calculating annual loads is presented as follows: average daily load x seconds per year = annual load. The correct formula is: average daily load x days per year = annual load. Since the loading estimates presented in the main body of the report appear to be within an order of magnitude of the amount expected based on other sources, the formula was incorrectly typed in the report.	David Okita, *Solano County Water Agency*	10/8/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loading section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.
Appendix C	Many of the comments on Appendix C are presented in the comments on Section 4 of the report. The copy of Appendix C reviewed by the NBA Contractors was missing pages C-3 to C-6, C-11 to C-13, C-18 to C-33, and C-35 to C-38.	Byron Buck/Dan Nelson, *Ag/Urban Policy Group*	7/11/97	

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Topic	Comment	Person/ Organization	Date	Response
Appendix C	Page C-22: Diazinon is not registered (legally used) on alfalfa. Furthermore, very little diazinon is used on almond orchards in May.	Dennis Kelly, *Novartis Crop Protection, Inc.*	10/3/97	*Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 27, 1997: The sources and loading section is being rewritten, but will not be completed for the October 31, 1997, version of the Affected Environment document.

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Comments from Stakeholders
Phase II Alternative Descriptions

Topic	Comment	Person/ Organization	Date	Response
General	In the "Summary of Common Programs," second bullet item "Water Quality" includes the terms "pollutant" and "pollutants." To my knowledge, CALFED has never defined "pollutant." Its management uses the term loosely to mean any chemical constituent. "Pollutant" should be explicitly defined in CALFED documents as those constituents which impair the designated beneficial uses of the CALFED jurisdiction waters. This would be in accord with Porter-Cologne and Clean Water Act definitions. Under these definitions, a "pollutant" is not a constituent that in some places at some times from some sources may be adverse to water quality. It is a constituent that has a high degree of potential to be specifically adverse to water quality within the Delta and its associated waters.	G. Fred Lee, *G. Fred Lee & Associates*	1/27/89	
General	The NBA Contractors recommend that CALFED evaluate the feasibility of providing a second intake for the NBA to improve drinking water quality and provide operational flexibility. Although relocation of intakes to avoid contaminant sources is listed as an action in the Water Quality Program, none of the alternatives discussed in the Phase II Alternative Descriptions report include relocating or providing a second intake for the NBA Contractors. A few water quality programmatic actions may improve source water quality at the NBA pumping plant; however, many of the alternatives divert fresh water from the Sacramento River or the Ship Channel and away from the NBA intake. The Program anticipates development of large areas of shallow water habitat to increase populations of native species in the vicinity of the NBA intake. The NBA's pumping is restricted under the Delta Smelt Biological Opinion when larval Delta smelt are detected at the NBA. Increasing the breeding ground for Delta Smelt so near NBA will undoubtedly result in more Delta smelt being taken at the NBA pumping plant unless an alternative location is provided.	David B. Okita, *Solano County Water Agency*	7/11/97	

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Comments from Stakeholders
Phase II Alternative Descriptions

Topic	Comment	Person/ Organization	Date	Response
Common Programs	CEQA requires that the EIR consider "the whole of the action." The common program elements are not being subjected to the requirements of CEQA, and some have in fact been written in essentially final form prior to environmental review. It is essential that the actions contemplated under the common programs, especially the Ecosystem Restoration actions, be subjected to the requirements of CEQA for a reasonable range of alternatives and the avoidance and mitigation of significant impacts at the programmatic level.	A.J. Yates, *Department of Food and Agriculture*	9/29/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: CALFED is currently conducting a programmatic EIR/EIS to assess the impacts of all CALFED actions and alternatives. The draft programmatic EIR/EIS will be available to the public in early 1998 and will include a Water Quality Technical Report to evaluate the water quality impacts associated with actions and alternatives.
Common Programs	The common program elements clearly do not meet the solution principals of the Governor's water policy in the treatment of agricultural land and water use.	A.J. Yates, *Department of Food and Agriculture*	9/29/97	
Actions	For each major pollutant source (e.g., mine drainage, agricultural drainage, etc.) CALFED should provide a description of the problem, including the chemical or physical parameters of concern and the effect on water quality and aquatic organisms - a state of the watershed report. CALFED should also provide information on how well understood the problem is. Without this information, it is difficult to evaluate the need for the actions and to determine if the "performance measures" and "indicators of success" are appropriate.	Dan Nelson, Byron Buck, *Ag/Urban Water Caucuses Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: A Water Quality Implementation Plan will be developed as part of Phase III of CALFED. The Plan will provide greater specificity on actions, identify a mechanism for prioritization, and identify implementing entities. *Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:* October 24, 1997: Comment noted.

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Comments from Stakeholders
Phase II Alternative Descriptions

Topic	Comment	Person/ Organization	Date	Response
Actions	Each action contains a "performance measure" and an"indicator of success." These performance measures and indicators of success are often qualitative rather than quantitative and in cases where they are quantitative, they are often based on chemical concentrations in ambient water rather than biological responses. Many scientists question the ecological validity of chemical concentrations as indicator of ecosystem health. We recognize the difficulties in determining appropriate quantitative responses and in measuring successful biologically, but we urge CALFED to quantify the performance measures and indicators of success where possible and to base them on biological responses in the system, where appropriate.	Dan Nelson, Byron Buck, *Ag/Urban Water Caucuses Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Performance measures and indicators of success will be quantified whenever possible. Measures of biological responses such as the results of toxicity tests have been included as performance measures, where appropriate, in the Water Quality Program Plan.
Actions	The Water Quality Program addresses drinking water quality issues with incentives for upgrading drinking water treatment plants to more advanced treatment, and with relocation of drinking water intakes to areas that are not influenced by discharges of drinking water contaminants. Reliance on treatment alone to address drinking water quality issues is not sufficiently protective of public health and is at odds with EPA's source water protection programs. Although many of the source control actions in the Water Quality Program will protect and improve drinking water supplies to some extent, some of the key parameters of concern to urban water supply agencies have not been adequately addressed (e.g., total organic carbon and bromide). To protect the drinking water beneficial use, the CALFED Water Quality Program needs to include additional source control actions that address drinking water quality parameters and that incorporate targets for improved source water quality for drinking water supplies. CALFED should determine if adequate drinking water quality can be provided by source control actions or if it will be necessary to relocate drinking water intakes to provide raw water quality that can be treated to meet drinking water standards. Relocation of water supply intakes should be included in the CALFED storage and conveyance alternatives and the water quality impacts (both to drinking water supplies and the ecosystem) should be evaluated in the programmatic EIR/EIS.	Dan Nelson, Byron Buck, *Ag/Urban Water Caucuses Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: On December 3, 1997, a meeting between the drinking water industry, USEPA, and CALFED was held to identify source water quality targets for bromide and TOC. As a result of the discussion, urban water agencies are going to further analyze different levels of treatment for different levels of a constituent and report their findings to CALFED. Water quality impacts to drinking water supplies and the ecosystem are being evaluated in the CALFED programmatic EIR/EIS. The Water Quality Program Plan identifies twelve actions targeted at urban and industrial runoff, wastewater and industrial discharges, agricultural drainage, water treatment, and water management to address parameters of concern to drinking water. These actions address turbidity, total organic carbon, salinity, pathogens and bromides.

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Comments from Stakeholders
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Topic	Comment	Person/ Organization	Date	Response
Actions	It is appropriate to base performance measures and indicators of success on chemical or physical characteristics of the water for drinking water improvement actions.	Dan Nelson, Byron Buck, *Ag/Urban Water Caucuses Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Comment noted.
Actions	CALFED's Water Quality Program includes source control actions addressing drinking water parameters in a few cases, including 1) agricultural drainage source control measures and water management practices to address salinity in the San Joaquin River, 2) urban and industrial runoff source control and treatment measures to address nutrients and turbidity, and 3) source control actions for boat discharges to address pathogens. Although these action strategies address drinking water quality parameters through source control methods, for the most part there are no connections made between the source control action and a target for drinking water quality improvement. In addition some of the key parameters of concern to urban water supply agencies have not been adequately addressed (e.g., TOC and bromide). To protect the drinking water beneficial use, the CALFED Water Quality Program needs to include additional source control actions that address drinking water quality parameters and that incorporate targets for improved source water quality for drinking water supplies. We have recommended additional actions that address drinking water quality parameters and that incorporate targets for improved source water quality for drinking water supplies. We have recommended additional actions for several sources of pollutants.	*Ag/Urban Water Caucuses Policy Group*	7/11/97	

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Comments from Stakeholders
Phase II Alternative Descriptions

Topic	Comment	Person/ Organization	Date	Response
Actions/ Coordination	Many of the Programmatic Actions contain implementation methods that require action by other state and federal agencies that are not under CALFED's jurisdiction. We assume CALFED will make recommendations to those agencies to implement the CALFED Water Quality Program and the individual agencies will then engage in their normal processes for establishing regulations or programs. Many actions contain methods that existing regulations should be enforced. We believe strongly that existing regulations should be enforced. If existing regulations are not being enforced, CALFED should make specific recommendations to regulatory body(ies) where better enforcement would help improve the Bay-Delta ecosystem. The Water Quality Program should contain actions that would supplement existing regulation with voluntary incentive-based methods.	Dan Nelson, Byron Buck, *Ag/Urban Water Caucuses Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: The CALFED Bay-Delta Program is not a regulatory body. As a result, the CALFED Water Quality Program is designed to protect all beneficial uses of water by supporting existing regulations, not creating new regulations.
Agricultural Drainage	Regarding the actions to reduce selenium, salinity, pesticides and ammonia - The biological significance of selenium has not been clearly established. A study of the biological effects of selenium should be included in the comprehensive monitoring, assessment and research program. An active land management program that includes planting crops, such as safflower, that use water from the high water table should be evaluated. Active land management may result in improved water quality compared to land retirement. We concur with CALFED that landowner participation should be voluntary and that compensation should be provided for land that is retired. Treatment of drainage water for removal of salts and selenium should be evaluated along with land management in the CALFED program. If concerns such as cost, brine disposal, and technical feasibility can be overcome, drainage water could be a valuable resource if cost effective treatment can be identified. Treatment methods to be evaluated should include reverse osmosis and low pressure membranes, constructed wetlands, and continued research in other treatment techniques.	Dan Nelson, Byron Buck, *Ag/Urban Water Caucuses Policy Group*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Comment incorporated into Water Quality Program Plan.

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Comments from Stakeholders
Phase II Alternative Descriptions

Topic	Comment	Person/ Organization	Date	Response
Kesterson Reservoir	Item 10: Should include some of the results of the construction of Kesterson Reservoir. Kesterson was constructed as a reservoir for holding high drainage flows to level out the discharge from the San Luis Drain into the Delta. Kesterson was not constructed as an evaporation pond. Some of the issues would include concentration of toxic compounds in the ponds, leakage of toxic compounds into the ground water and into the adjacent land, and the use of the ponds by waterfowl as fly by or wintering habitat.	Unknown		

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Comments from Stakeholders
Appendix B - May 13, 1997 Version

Topic	Comment	Person/ Organization	Date	Response
Agricultural Drainage Actions	The Department of Water Resources is completing a one-year monitoring program to identify the sources of pollutants to the NBA source water. Runoff from agricultural crop land and grazing is one potential source of organic carbon, turbidity, nutrients and pathogens. We support CALFED's actions aimed at controlling these sources of contaminants.	David B. Okita, *Solano County Water Agency*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/10/97: Comment noted.
Water Treatment Actions	Page 8: The water quality program includes an action to improve drinking water quality through various treatment techniques. Several of the NBA Contractors have already upgraded or are making plans to upgrade their treatment plants to include ozone or enhanced coagulation. Installation of membrane filtration is not economically feasible. Reliance on treatment technologies alone to address drinking water quality issues is not sufficiently protective of public health. Source water protection must be a component of CALFED's Water Quality Program and action strategies addressing parameters of concern to drinking water agencies must be included.	David B. Okita, *Solano County Water Agency*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: The Water Quality Program has developed actions to address source water quality problems associated with mine drainage, agricultural drainage, urban and industrial runoff, and various other sources.

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Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Mine Drainage Actions	Page 1: Action that states "reduce toxic effects of cadmium, copper and zinc loadings to the Delta by source treatment...." - In recent years, the Regional Boards have been reluctant to commit public funds on mine abatement projects due to the concern that the State would become liable for clean up costs. The California Water Code has been amended to allow "good Samaritans" to become involved in mine abatement and to avoid liability. The federal Clean Water Act has not been revised and should be amended to allow state agencies and others to pursue mine abatement while avoiding liability associated with doing so. We recommend that CALFED take the lead in pursuing this revision to the federal Clean Water act. Ag/Urban technical staff would be pleased to meet with your staff to discuss the content of the state legislation and our recommendation for federal legislation. The CVRWQCB has identified the mines that contribute significant loadings of pollutants to the Sacramento River. The information on metals loading must be combined with information on areas of biological important (e.g. salmon spawning areas). CALFED should develop a priority list and identify the mines that should be remediated first to provide the most biological benefit. CALFED needs to find the appropriate balance between conducting studies and taking action with respect to cleaning up mine sites. "Upper Sacramento River" should be defined. To some, the designation of Upper Sacramento River means the Sacramento River above Lake Shasta. CALFED's efforts on mine drainage need to be largely directed at mines discharging into the Sacramento River or it's tributaries downstream of Lake Shasta and other major reservoirs. We believe that is CALFED's intent but are confused with the discussion of the Upper Sacramento River.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 11/21/97: Comment noted. CALFED is not a regulatory body. The Clean Water Act is administered through a separate process. Prioritization of actions will occur in Phase III of the CALFED process. "Upper Sacramento" is defined in the water quality documents as Shasta Dam to Red Bluff.
Mine Drainage Actions	Page 2: The performance measure "reduction in annual copper loading (during an average water year)...." - CALFED should provide the basis for this load reduction. If the load is reduced to 10,000 pounds, will the Basin Plan objectives for copper be met in the Sacramento River? Is CALFED recommending load reductions for cadmium and zinc that are commensurate with the copper load reduction?	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 10/28/97: Comment noted and statement removed.

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Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Mine Drainage Actions	Page 2: The indicator of success "Achievement of Basin Plan objectives for cadmium, copper and zinc...." - The indicator of success for this action should include a significant reduction (or elimination) of aquatic toxicity in the Sacramento River due to mine drainage. Although it is difficult to quantify a significant reduction in toxicity at this time, it should be possible to do so after conducting a year or two of the comprehensive, monitoring, assessment, and research program.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: The indicator of success "No likely significant toxicity to native and laboratory test organisms" is included in the Water Quality Program Plan.
Urban and Industrial Runoff Actions	Page 2: The action "Reduce toxic effects of copper, zinc and cadmium loadings to the Delta...." - There is currently little information to suggest that metals in urban runoff are producing toxicity in receiving waters of the Delta watershed. The comprehensive, monitoring, assessment and research program should provide information on the effects of metals on the aquatic life of receiving waters. We recommend that CALFED concentrate on reducing the effects of pesticides in urban runoff until monitoring results either confirm whether or not metals are adversely affecting aquatic life. The indicators of success under this action should be a reduction (or elimination) of aquatic toxicity in the Delta and its tributaries due to metals in urban and industrial runoff, if the comprehensive monitoring, assessment, and research program provides information that metals in urban runoff are resulting in toxicity in receiving waters.	*Ag/Urban Water Caucuses*	7/11/97	Indicators of success comments incorporated.

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Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Urban and Industrial Runoff Actions	Page 2: The action "Reduce toxicity from the pesticides chlorpyrifos and diazinon in the Delta..." - This action should be reworded as follows: "Reduce (or eliminate) toxicity from urban, industrial, and residential pesticides such as chlorpyrifos and diazinon that have been identified as causing toxicity to aquatic life in the Delta...." Diazinon and chlorpyrifos have been identified as causing toxicity in urban runoff discharges and sufficient data already exist to support the need for control programs for both agricultural and urban use of these chemicals. There is evidence that other pesticides (e.g. diuron) may also cause toxicity and much of the toxicity has not yet been chemically identified. Although CALFED should focus its actions on known sources of toxicity to aquatic life in the Delta, this action should not be limited to toxicity caused by chlorpyrifos and diazinon. Currently, there is not enough information to know what other pesticides are causing toxicity in receiving waters of the Delta watershed because much of the toxicity has not yet been chemically identified. The comprehensive monitoring, assessment, and research program should provide this information.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: The action will be limited to chlorpyrifos and diazinon unless future data on urban and industrial runoff indicates toxicity associated with other pesticides.
Urban and Industrial Runoff Actions	Page 2: The method "Enforcement of existing source control regulations" should be replaced with "Provide regulatory incentive and financial incentives for implementation of additional urban and industrial runoff source control measures." We also recommend an additional action, "Work with watershed stakeholder groups on source control education."	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Comments incorporated into Water Quality Program Plan.
Urban and Industrial Runoff Actions	Page 3: The action "Reduce the toxic effects of nutrient loadings and consequently, oxygen depletion...." - It is misleading to refer to the toxic effects of nutrient loadings. This action should be restated as "Eliminate the oxygen depletion problem in the Delta by reducing nutrient loads from (list sources of nutrient contributing to oxygen depletion problem)." We know of only one area in the San Joaquin River near Stockton where oxygen depletion is a problem. Are there other areas of the Delta or its tributaries that have low dissolved oxygen problems?	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: The action has been modified in the WQPP to include a statement noting that the depletion problem is located near Stockton.

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Topic	Comment	Person/ Organization	Date	Response
Urban and Industrial Runoff Actions	Page 4: The action "Reduce the impacts of sediment loading, and subsequent turbidity to the ecosystem of the Delta...." - An additional method should be added to evaluate the feasibility of detention basins in new developments for control of sediment and its associated pollutants. The performance measure "Decreased turbidity levels at Delta water supply intakes," should be expanded to include decreased turbidity levels in urban runoff discharges to the Delta and its tributaries.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Comments incorporated into the WQPP.
Urban and Industrial Runoff - Action Addition	Recommended action is "Evaluate the loadings of TOC, salinity and pathogens in urban runoff and assess the need for source control measures to reduce these parameters of concern to drinking water supplies." Recommended methods are "Include monitoring for TOC, salinity, and pathogens in stormwater and dry season runoff as part of the comprehensive monitoring, assessment and research program"; and "Evaluate the relative loading of these constituents in urban runoff, wastewater discharges, and agricultural drainage discharges." Recommended performance measures are "Improved understanding of the sources of TOC, salinity, and pathogens in the Delta and its watersheds"; "Reduced TOC, salinity, and pathogen loads entering the Delta and its tributaries"; and "Reduced peak in salinity concentrations at water supply intakes." Recommended Indicator of Success is "Achievement of water supply target levels for TOC (3.0 mg/L, quarterly average), pathogen (<1 oocyst/100L), and salinity (220 mg/L, 10 year average)."	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Comments incorporated into the WQPP.

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Topic	Comment	Person/ Organization	Date	Response
Wastewater and Industrial Discharges Actions	Page 4: Under the action "Reduce the impact of domestic wastes and hence pathogens..." - The indicator of success "Lower pathogens near water supply intakes" should be quantified and stated as "Achievement of water supply target levels for pathogen (<1 oocyst/100L).	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comments incorporated into the WQPP.
Wastewater and Industrial Discharges Actions	Page 5: The action "Reduce the toxic impacts of oxygen depleting substances, and copper and mercury loadings..." - There are no significant municipal and industrial sources of copper and mercury to Suisun Bay and Carquinez Strait.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: During Phase III, CALFED will develop a mechanism to prioritize actions as part of the CALFED Water Quality Implementation Plan. This mechanism will allow the program to implement the highest priority actions first.
Wastewater and Industrial Discharges Actions	Page 5: The method "Increase incentives for industries to pre-treatment discharges...." should be reworded to state "Financial and regulatory incentives will be provided to industries to pre-treat discharges containing copper, mercury, and oxygen depleting substances." Many food processing industries have high BOD loads so the method should not be confined to copper and mercury but should also include oxygen depleting substances. The method "Incentives for municipal wastewater effluent reclamation and reuse" should be reworded to state "Financial and regulatory incentives will be provided to municipalities to provide improved wastewater effluent treatment and to identify and implement opportunities for wastewater effluent reclamation and reuse."	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.

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Topic	Comment	Person/ Organization	Date	Response
Wastewater and Industrial Discharges Actions	Page 5: The action "Reduce the toxic impacts of selenium loadings to the Delta through source control..." - Reducing selenium loading in industrial discharges to Suisun Bay and Carquinez Strait will have little effect on selenium loadings to the Delta. The biological significance of selenium has not been clearly established. It is premature to assume that selenium has had "toxic effects" on aquatic organisms. A study of the biological effects of selenium should be included in the comprehensive monitoring, assessment, and research program.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Industrial discharges are a source of selenium to the Delta. During Phase III, a mechanism for implementation of actions will be developed. This mechanism will allow implementation of the highest priority actions. If industrial discharges are not identified by this process as a high priority, then they will not be implemented first.
Wastewater and Industrial Discharges Actions	Page 5: The indicator of success "Reduced tissue bioaccumulation of selenium in aquatic organisms of the western Delta," we recommend that the indicator of success be a reduction in the tissue concentrations of selenium to levels that are not harmful to aquatic organisms in the western Delta. We recognize that research is needed to determine the harmful levels for many aquatic organisms and should be included in the comprehensive monitoring assessment, and research program.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/21/97: Comment incorporated into the WQPP.
Wastewater and Industrial Discharges Actions	The action "Reduce the toxic effects of ammonia entering the Delta and its tributaries from waste water treatment plant discharge through improved treatment," was mistakenly included under the Agricultural Drainage section of Appendix B.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 10/28/97: Comment noted and statement moved.

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Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Wastewater and Industrial Discharges - Action Addition	We recommended the following action be added: "Evaluate the loadings of TOC, salinity and pathogens from wastewater and industrial treatment plant discharges, and assess the need for source control measures to reduce these parameters of concern to urban water supplies." Recommended methods are "Include monitoring for TOC, salinity, and pathogens in wastewater and industrial treatment plant discharges as part of the comprehensive, monitoring, assessment, and research program"; and "Evaluate the relative loading of these constituents in urban runoff, wastewater discharges, and agricultural discharges." Recommended performance measures are "Improved understanding of the sources of TOC, salinity, and pathogens in the Delta and its tributaries"; "Development of appropriate actions to reduce TOC, salinity, and pathogen loads entering the Delta and its tributaries." Recommended indicator of success is "Achievement of water supply target levels for TOC (<3.0mg/L, quarterly average), pathogens (<1 oocyst/100L) and salinity (220mg/L, 10 year average and reduced peaks in salinity) at the water supply intakes."	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated as an action applicable to Comprehensive Monitoring, Assessment, and Research Program.
Agricultural Drainage Actions	Page 5: We recommend that the agricultural drainage section be divided into several categories for ease of understanding the pollutant sources and the actions: Subsurface Drainage (selenium, boron, salinity), Surface Runoff (TOC, salinity, pesticides), Runoff from Dairies (ammonia, pathogens).	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Distinctions between subsurface drainage, surface runoff and runoff rom dairies have been made to assist the reader.

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Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Agricultural Drainage Actions	Page 5: Regarding the action "Reduce the toxic effects of selenium loadings to the Lower San Joaquin River..."- The biological significance of selenium has not been clearly established. Additional studies are needed to determine if selenium has had toxic effects on aquatic organisms in the San Joaquin River and the Delta. It is not clear that selenium from agricultural drainage from the San Joaquin Valley reaches the Delta in concentrations that are harmful to aquatic life. A study of the biological effects of selenium should be included in the comprehensive monitoring, assessment, and research program.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.
Agricultural Drainage Actions	Page 6: Regarding the method "Change use of lands that are major sources of selenium through voluntary landowner..." - An active land management program that includes planting crops, such as safflower, that use water from the high water table should be evaluated. Active land management may result in improved water quality compared to land retirement. In some cases, retiring land with a high water table could create salt flats that could potentially cause more severe environmental problems than continued production of drainage water. We concur that landowner participation should be voluntary and that compensation should be provided for land that is retired.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.
Agricultural Drainage Actions	Page 6: Regarding the method "Reduce drainage flows through increased water use efficiency." - Improvements in irrigation efficiency can be achieved by reducing surface runoff or deep percolation. Reduction in surface runoff will not reduce subsurface drain water volume or selenium loads directly, as there is very little selenium in surface runoff. Reductions in deep percolation will reduce the volume of subsurface drain water and, therefore, will reduce selenium loads. However, given that subsurface drain water moves laterally between fields, and over longer distances through sand stringers and other pathways, it is difficult to predict the reduction in subsurface drain water volume and selenium loads that can be achieved by improving water use efficiency.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.

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Topic	Comment	Person/ Organization	Date	Response
Agricultural Drainage Actions	Page 6: Regarding the method "Treat drainage for selenium removal." - The feasibility of various treatment options should be evaluated. For example, we believe that a 1 mgd biological treatment plant should be constructed and studied. Westlands Water District designed a 1 mgd plant but did not proceed with construction. DWR has conducted pilot scale testing which showed that 50 % removal rates could readily be achieved. Additional work needs to be done to identify an optimized process that can achieve a 90% removal rate.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.
Agricultural Drainage Actions	Page 6: Regarding the performance measure "Reduced selenium loadings from the Grassland area of the San Joaquin River watershed and compliance with Basin Plan objectives for selenium."- The Grassland area is not the only source of selenium to the San Joaquin watershed. The Coast Range is a source of selenium as is the irrigation water derived from the Delta.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Reference removed.
Agricultural Drainage Actions	Page 6 - Regarding the indicator of success "Reduced selenium concentrations in the San Joaquin River near Vernalis, where the River flows into the Delta": We recommend that the indicator of success be a reduction in the tissue concentrations of selenium to levels that are not harmful to aquatic organisms.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.
Agricultural Drainage Actions	Page 6: Regarding the method "Concentration and safe disposal of agricultural drainage in evaporation ponds"- Evaporation ponds are not a practical solution in the Grassland area, particularly if selenium is in the water. The water quality and wildlife problems in Kesterson Reservoir are prime examples of the types of adverse effects that can result from evaporation ponds.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.

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Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Agricultural Drainage Actions	Page 6: Regarding the method "Treatment of agricultural drainage by reverse osmosis, constructed wetlands, or by other means." - Treatment of drainage water for removal of salts and selenium should be evaluated along with land management in the CALFED program. Although at the current time there are concerns to be overcome such as cost, bring disposal, and technical feasibility, the drainage water could be a valuable resource if cost effective treatment can be identified. Treatment methods to be evaluated should include reverse osmosis and low pressure membranes, constructed wetlands, and continued research in other treatment techniques.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.
Agricultural Drainage Actions	Page 6: Regarding the method "Time agricultural drainage discharges to coincide with periods when dilution flow is sufficient..." - Real-time monitoring is needed to time discharges to coincide with periods of high river flow and low in-river concentrations so that water quality objectives are not exceeded in receiving waters. This method can potentially result in lower salinity concentrations in the San Joaquin River at certain times but it will not likely reduce the total salinity load. This is inconsistent with the reduction in salinity loads called for by the performance measure.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.
Agricultural Drainage Actions	Page 6: Regarding the performance measure "Reduced salinity loads entering the San Joaquin River from adjacent lands and compliance with Basin Plan objectives." - Timing of drainage discharges for periods of high flow will not reduce salinity loads to the San Joaquin River; however, it will reduce salinity concentration. We recommend adding an additional performance measure, "Reduced peaks in salinity levels at the water supply intakes."	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.
Agricultural Drainage Actions	Page 6: Regarding the indicator of success "Reduced salinity in the San Joaquin River near Vernalis, where the River flows into the Delta." - The percent reduction in salinity or percent of time that the target level for salinity is met should be specific in the indicator of success. Additional compliance points, such as the water supply intakes, should be added. We recommend that the target level at the water supply intakes be <220mg/L, 10 year average.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP, where appropriate. On December 3, 1997, a meeting was held between CALFED, the USEPA, and drinking water industry to discuss bromide and TOC levels in the Delta Region.

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Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Agricultural Drainage Actions	Page 7: Regarding the action "Reduce the toxic effects of carbofuran, chlorpyrifos, and diazinon in the Delta..."- This action should be reworded as follows, "Reduce toxicity from agricultural pesticides such as carbofuran, chlorpyrifos, and diazinon that have been identified as causing toxicity to aquatic life in the Delta..." Carbofuran, diazinon and chlorpyrifos have been identified as causing toxicity in Delta and tributary waters; however, there is evidence that other pesticides (e.g., ziram) may also cause toxicity. Although CALFED should focus its actions on known sources of toxicity to aquatic life in the Delta, this action should not be limited to toxicity caused by chlorpyrifos and diazinon because we currently do not have enough information to know what other pesticides are causing toxicity in the receiving waters of the Delta watershed, as much of the toxicity has not yet been chemically identified. The comprehensive, monitoring, assessment and research program should provide this information.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comments incorporated into the WQPP.
Agricultural Drainage Actions	Page 7: Regarding the method "Incentives and/or enforcement of existing regulations" and "Incentives for pesticide users to increase implementation of best management practices including integrated pest management and grower education." - While we believe that existing regulations must be enforced, we support voluntary, incentive-based methods rather than regulatory-based programs. We suggest that the two methods be rewritten to state "Provide regulatory and financial incentives for implementation of agricultural drainage source control measures that include incentives for pesticide users to increase implementation of best management practices including integrated pest management and grower education." A second method should be added, "Provide financial incentives and assistance for pilot-scale testing of best management practices to control pesticide discharges in agricultural surface runoff." We also recommend an additional method, "Work with watershed stakeholder groups on source control education."	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.

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Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Agricultural Drainage Actions	Page 6 - The following action was mistakenly placed under the Agricultural Drainage section. It is more appropriately categorized as a water management action. Action: "Reduce salinity for agricultural source water in the South Delta through improved outflow patterns and water circulation in the Delta.	*Ag/Urban Water Caucuses*	7/11/97	12/10/97: Comment noted and statement moved.
Agricultural Drainage Actions	Page 7: Regarding the performance measure "Reduction of toxicity in Delta channel waters."- The performance measure should be restated, "Reduction (or elimination) of toxicity in Delta channel waters and tributary waters."	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.
Agricultural Drainage-Action Addition	Under a Surface Runoff subheading, we recommend that the following action be added: "Reduce the impacts of sediment loading and subsequent turbidity to the ecosystem of the Delta and its tributaries and to urban drinking water sources in the Delta, through agricultural runoff control measures." The following method should be added: "Provide incentives and assistance for implementation of agricultural land use practices and improved irrigation strategies to reduce soil erosion, and for installation of buffer strips." The following performance measure should be added: "Reduction of sediment loading to the Delta and its tributaries from agricultural areas with high erosion rates." The following indicators of success should be added: "Achievement of a 50 NTU monthly median at drinking water intakes in the Delta and tributaries." "Achievement of Basin Plan objectives for turbidity." Those objectives should be stated here.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.

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Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Agricultural Drainage - Action Addition	Under a Surface Runoff subheading, we recommend that the following action be added: "Reduce the impacts of TOC loading an drinking water supplies by controlling TOC discharges from the Delta islands." The following methods should be added: "Provide financial assistance and incentives for pilot-scale testing and implementation of water management practices and cropping patterns to reduce contributions of TOC from Delta islands." "Change or modify land use on Delta islands with peat soils." "Reduce concentration of TOC in agricultural drainage water through treatment of drainage water prior to discharge." The following performance measure should be added: "Reduction in TOC loads to the Delta by at least 25 percent (the comprehensive monitoring, assessment, and research program will provide information on whether a 25 percent reduction in conjunction with other source control measures will allow the target level of <3.0 mg/L to be met)." The following indicator of success should be added: "Achievement of a TOC target level of <3.0 mg/L quarterly average at drinking water supply intakes."	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated, as appropriate. On December 3, 1997, a meeting between the drinking water industry, USEPA, and CALFED was held to identify source water quality targets for bromide and TOC. Water quality impacts to drinking water supplies and the ecosystem are being evaluated in the CALFED Programmatic EIR/EIS.

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Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Agricultural Drainage - Action Addition	Under a Rangeland, Dairies, and Confined Animal Facilities subheading, we recommend the following action be added: "Reduce the impacts of pathogens on drinking water supplies by controlling sources of pathogens from rangelands, dairies, and confined animal facilities." The following methods should be added: "Provide financial incentives and education assistance for pilot-scale testing and implementation of best management practices that control pathogen discharges from rangelands, dairies, and confined animal facilities." "Provide financial resources for the Regional Board to regulate all dairies with waste discharge requirements." The following performance measure should be added: "Reduction in pathogen loads entering the Delta and its tributaries from confined animal facilities and rangelands." The following indicator of success should be added: "Achievement of pathogen target level (<1 oocyst/100L) at drinking water supply intakes."	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comments incorporated into the WQPP.

D-035373

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Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Water Treatment Actions	Page 8: Regarding the action "Improved treated drinking water quality (including reduction in formation of disinfection by-products) through treatment...." - In many cases urban drinking water supplier have already upgraded or are making plans to upgrade their treatment plants to include ozone or enhanced coagulation. Installation of granular activated carbon (GAC) and/or membrane filtration is not economically feasible, and these technologies have associated environmental impacts such as siting of GAC regeneration facilities and wasting 15 to 25 % of the water supply in concentration brine when using membranes. Also, reliance on treatment technologies alone to address drinking water quality issues is not sufficiently protective of public health and is at odds with EPA's source water protection programs. Source water protection must be a central component of any Bay-Delta solution, and CALFED's Water Quality Program must include source control action strategies addressing each of the drinking water parameters of concern.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Source control action strategies have been developed as part of the WQPP to address parameters of concern to drinking water.
Water Treatment Actions	Page 8: Regarding the method "Relocate water supply intakes to areas that are not influenced by those discharges."- CALFED should determine if adequate drinking water quality can be provided by source control actions or if it will be necessary to relocate drinking water intakes to provide raw water quality that can be treated to meet drinking water standards.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* Comment noted.

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Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Unknown Toxicity Actions	Page 9: Regarding the methods "Conducting toxicity testing and toxicity identification evaluations and/or other appropriate methods." and "Coordinate efforts with monitoring programs being conducted by others." - CALFED should design a comprehensive toxicity testing, TIE, and chemical testing program to fully evaluate toxicity in the Sacramento and San Joaquin Rivers, their tributaries, and the Delta. The comprehensive monitoring, assessment, and research program should determine the extent and amount of toxicity present in the rivers and sediments, identify the toxicants, determine the sources of the toxicants, and evaluate control measures. The various programs that are on-going or planned have not been designed to adequately address the full scope of potential toxicity in the watersheds. CALFED's efforts should be directed at doing so and then opportunities for coordination with other programs should be evaluated.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Comment incorporated into the WQPP.
Unknown Toxicity Actions	Page 9: Regarding the performance measure "Number of toxicity bioassays and Toxicity Identification Evaluation test conducted." - The performance measure should be full implementation of a comprehensive program, not simply a counting of the number of tests conducted.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Comment incorporated into the WQPP.
Unknown Toxicity Actions	Page 9: Regarding the indicator of success "Successful identifications of causal agents of toxicity in the channels of the Delta estuary." - The indicator of success should be a significant reduction (or elimination) of the amount of toxicity present in the rivers and sediments due to successful implementation of control measures for toxicants identified in the comprehensive monitoring, assessment and research program.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.
Unknown Toxicity Actions	Page 9: Regarding the action "Identify and implement actions to address potential toxicity to water and sediment within the Delta and its tributaries." - This action should be reworded to state, "Identify and implement actions to reduce toxicity to aquatic organisms from chemicals in the water and sediments." This action should include evaluation of persistent chemicals (DDT, pesticides, chlordane, etc.) that have been banned in California.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/22/97: Comment incorporated into the WQPP.

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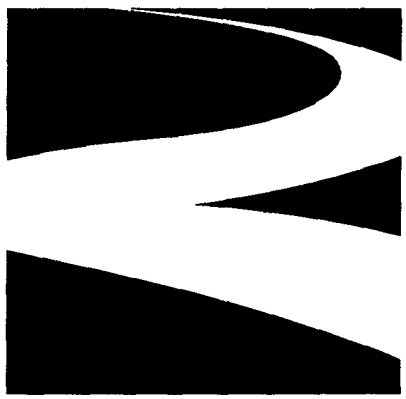
Comments from Stakeholders
Appendix B - Version Unknown[1]

Topic	Comment	Person/ Organization	Date	Response
Water Management Actions	The water management actions do not appear to be related to the Water Quality Program and should be included in other elements of the CALFED program. The water quality impacts of these measures should then be assessed in the water quality impact analysis. In some cases, water management actions, including water conservation practices, can reduce or affect water quality for agricultural and environmental purposes. For example, reduced water supply in systems where the water is reused or recirculated throughout the service area can cause increased salinity levels that detrimentally affect crop and soil health. Reduced water can also affect the quality of wildlife habitat found in agricultural drains.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/20/97: Water management activities can have a direct impact on water quality in the Delta Region. Water management actions are included in the WQPP in response to stakeholder input.
Water Management Actions	Regarding the method "Construct one or more tide gates, weirs, dams or sills at the head of Old River and possibly other southern Delta locations to manage drainage flows, tidal currents and stages in the San Joaquin and Middle River and interconnecting channels." - Although this method would improve salinity in the south Delta as well as at the Tracy and Banks pumping plants, salinity concentrations would increase at the Contra Costa Water District pumping plant at Rock Slough. This is counter to CALFED's solution principle that impacts will not be redirected. Regarding the method "Provide dilution water for salinity control. (This measure would be considered as one possible means of mitigating salinity impacts of other CALFED actions, if such mitigation were necessary.)" - Source control and pollution prevention are the preferred methods of achieving salinity reductions.	*Ag/Urban Water Caucuses*	7/11/97	*Appears in 12/23/97 Resolution Plan for Water Quality Actions as:* 12/19/97: Taken by themselves, barriers in the Delta would generally have the characteristic of improving water quality in some areas at the expense of other areas. Therefore, the possibility of redirected impacts is an important consideration. As is the case with dilution actions, it is contemplated that such actions would be taken only in concert with other actions, and only when the net result would be water quality improvement or at least no worsening. Including barriers was a result of stakeholder input, and though it may have limited applicability, this potential tool should not be discarded out of hand, and should be evaluated for its potential to become a component part of comprehensive solutions.

1. The version(s) of Appendix B these comments address may have been prior to or after the May 8, 1997, version and may address more than one version of Appendix B. The number of version(s) and their date(s) is(are) unknown.



CALFED BAY-DELTA PROGRAM

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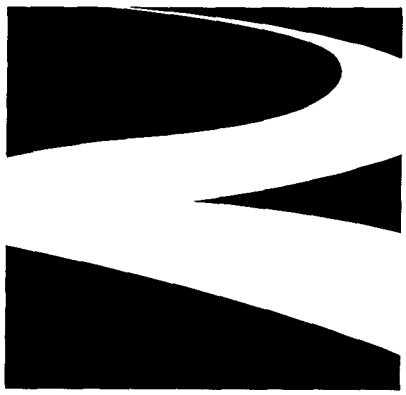

CALFED BAY-DELTA PROGRAM

TRANSMITTAL

MONTGOMERY WATSON

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Date: February 6, 1998

To: Judy Heath
CALFED Bay-Delta Program
1416 Ninth Street, Room 1148
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From: Sarah Holmgren

Re: CALFED Water Quality Program Deliverables

Ref:

The following items are:

- [ ] Requested
- [x] Enclosed
- [ ] Sent Separately via _____
- [ ] Report
- [ ] Specification
- [ ] Cost Estimate
- [1] Diskettes
- [ ] Test Result
- [ ] Prints
- [ ] Test Sample
- [ ] Other - Equip.

No. of Items	Description
3	Bound hard copies of the draft *Water Quality Program Comment and Response Summary, Volume II: Stakeholders*
1	Unbound Camera-ready original of the draft *Water Quality Program Comment and Response Summary, Volume II: Stakeholders*
1	Disk containing electronic files of the *Water Quality Program Comment and Response Summary, Volume II: Stakeholders* in Wordperfect 6.1.

These materials are submitted:

- [x] At your request
- [ ] For your action
- [x] For your approval
- [x] For your files
- [x] For your review
- [ ] For your information